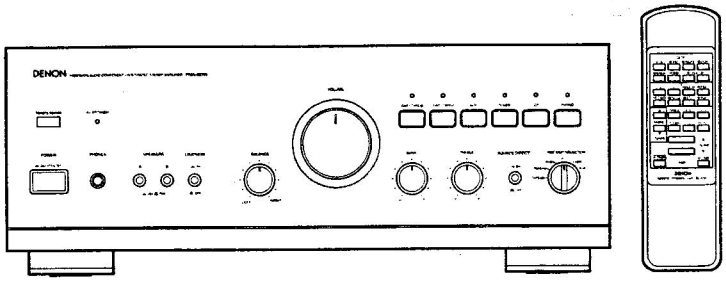
DENON

Hi-Fi Integrated Stereo Amplifier

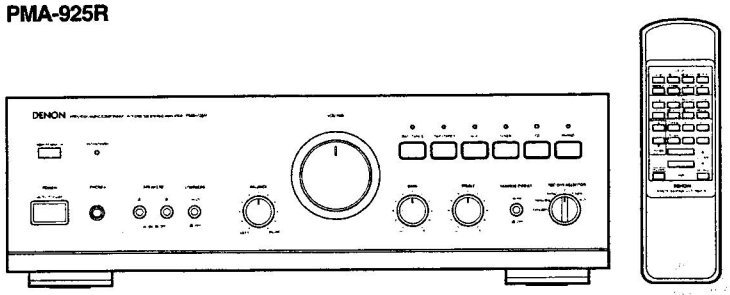
SERVICE MANUAL

MODEL PMA-925R/725R

INTEGRATED STEREO AMPLIFIER



PMA-925R



PMA-725R

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NIPPON COLUMBIA CO., LTD.

CAUTION

RISK OF ELECTRIC SHOCK
DO NOT OPEN

CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

WARNING: TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

● **FOR U.S.A. & CANADA MODEL ONLY**

CAUTION

TO PREVENT ELECTRIC SHOCK DO NOT USE THIS (POLARIZED) PLUG WITH AN EXTENSION CORD, RECEPTACLE OR OTHER OUTLET UNLESS THE BLADES CAN BE FULLY INSERTED TO PREVENT BLADE EXPOSURE.

● **POUR LE MODELE CANADIEN UNIQUEMENT**

ATTENTION

POUR PREVENIR LES CHOCS ELECTRIQUES NE PAS UTILISER CETTE FICHE POLARISEE AVEC UN PROLONGATEUR UNE PRISE DE COURANT OU UNE AUTRE SORTIE DE COURANT, SAUF SI LES LAMES PEUVENT ETRE INSEREES A FOND SANS EN LAISSER AUCUNE PARTIE A DECOUVERT.

● **DECLARATION OF CONFORMITY**
We declare under our sole responsibility that the product premain Amplifier PMA-925R/725R to which this declaration relates is in conformity with the following standards:
EN55013, EN55020, EN60555-2 and EN60555-3

● **ÜBEREINSTIMMUNGSERKLÄRUNG**
Wir erklären unter unserer Verantwortung, daß das Produkt Vor-Hauptverstarker PMA-925R/725R, auf das sich diese Erklärung bezieht, den folgenden Standards entspricht:
EN55013, EN55020, EN60555-2 und EN60555-3.

● **DECLARATION DE CONFORMITE**
Nous declarons sur notre seule responsabilite que l'appareil Amplificateur PMA-925R/725R auquel se refère cette déclaration est conforme aux standards suivants:
EN55013, EN55020, EN60555-2 et EN60555-3.

● **DICHIARAZIONE DI CONFORMITÀ**
Dichiariamo con piena responsabilità che il prodotto amplificatore di precedenza PMA-925R/725R, al quale questa dichiarazione si riferisce, è conforme alle seguenti normative:
EN55013, EN55020, EN60555-2 e EN60555-3.

● **DECLARACIÓN DE CONFORMIDAD**
Declaramos bajo nuestra única responsabilidad que el producto precedente, el Amplificador PMA-925R/725R, al que esta declaración hace referencia, es conforme con los siguientes estándares:
EN55013, EN55020, EN60555-2 y EN60555-3.

● **EENVORMIGHEIDSVERKLARING**
Wij verklaren uitsluitend op onze verantwoordelijkheid dat het produkt waarop deze verklaring betrekking heeft, de voorversterker PMA-925R/725R, in overeenstemming is met de volgende normen:
EN55013, EN55020, EN60555-2 en EN60555-3.

● **ÖVERENSSTÄMMELSESINTYG**
Härmed intygas helt på eget ansvar att produkten, förförstärkare/slutsteg PMA-925R/725R, vilken detta intyg hänvisar till uppfyller följande standarder:
EN55013, EN55020, EN60555-2 och EN60555-3

● **DECLARAÇÃO DE CONFORMIDADE**
Declaramos sob nossa exclusiva responsabilidade que o produto pre Amplificador Principal PMA-925R/725R ao qual esta declaração corresponde, está em conformidade com as seguintes normas:
EN55013, EN55020, EN60555-2 e EN60555-3

● **FOR U.S.A. MODEL ONLY**

SAFETY INSTRUCTIONS

1. Read Instructions – All the safety and operating instructions should be read before the appliance is operated.
2. Retain Instructions – The safety and operating instructions should be retained for future reference.
3. Heed Warnings – All warnings on the appliance and in the operating instructions should be adhered to.
4. Follow Instructions – All operating and use instructions should be followed.
5. Water and Moisture – The appliance should not be used near water – for example, near a bathtub, washbowl, kitchen sink, laundry tub, in a wet basement, or near a swimming pool, and the like.
6. Carts and Stands – The appliance should be used only with a cart or stand that is recommended by the manufacturer.

6A. An appliance and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the appliance and cart combination to overturn.

7. Wall or Ceiling Mounting – The appliance should be mounted to a wall or ceiling only as recommended by the manufacturer.
8. Ventilation – The appliance should be situated so that its location or position does not interfere with its proper ventilation. For example, the appliance should not be situated on a bed, sofa, rug, or similar surface that may block the ventilation openings; or, placed in a built-in installation, such as a bookcase or cabinet that may impede the flow of air through the ventilation openings.
9. Heat – The appliance should be situated away from heat sources such as radiators, heat registers, stoves, or other appliances (including amplifiers) that produce heat.
10. Power Sources – The appliance should be connected to a power supply only of the type described in the operating instructions or as marked on the appliance.
11. Grounding or Polarization – Precautions should be taken so that the grounding or polarization means of an appliance is not defeated.

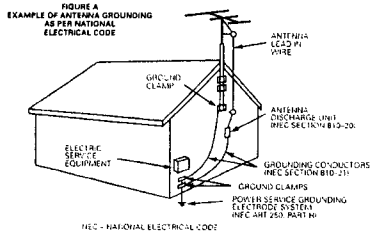


FIGURE A
EXAMPLE OF ANTENNA GROUNDING AS PER NATIONAL ELECTRICAL CODE
ANTENNA LEAD IN WIRE
GROUND CLAMP
ANTENNA DISCHARGE UNIT (NEC SECTION 810-20)
ELECTRIC SERVICE EQUIPMENT
GROUNDING CONDUCTORS (NEC SECTION 810-21)
GROUND CLAMPS
POWER SERVICE GROUNDING ELECTRODE SYSTEM (NEC ART 250, PART H)
NEC - NATIONAL ELECTRICAL CODE

12. Power-Cord Protection – Power-supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords at plugs, convenience receptacles, and the point where they exit from the appliance.
14. Cleaning – The appliance should be cleaned only as recommended by the manufacturer.
15. Power Lines – An outdoor antenna should be located away from power lines.
16. Outdoor Antenna Grounding – If an outside antenna is connected to the receiver, be sure the antenna system is grounded so as to provide some protection against voltage surges and built-up static charges. Article 810 of the National Electrical Code, ANSI/NFPA 70, provides information with regard to proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna-discharge unit, size of grounding conductors, location of antenna-discharge unit, connection to grounding electrodes, and requirements for the grounding electrode. See Figure A.
17. Nonuse Periods – The power cord of the appliance should be unplugged from the outlet when left unused for a long period of time.
18. Object and Liquid Entry – Care should be taken so that objects do not fall and liquids are not spilled into the enclosure through openings.
19. Damage Requiring Service – The appliance should be serviced by qualified service personnel when:
    - A. The power-supply cord or the plug has been damaged; or
    - B. Objects have fallen, or liquid has been spilled into the appliance; or
    - C. The appliance has been exposed to rain; or
    - D. The appliance does not appear to operate normally or exhibits a marked change in performance; or
    - E. The appliance has been dropped, or the enclosure damaged.
20. Servicing – The user should not attempt to service the appliance beyond that described in the operating instructions. All other servicing should be referred to qualified service personnel.

NOTE:
1. Always keep the POWER switch on the main unit turned on.
2. Turn the power on and off from the remote control unit.
3. Unplug the power cord when you do not plan to use the unit for a long period of time.

CAUTION:
If only the MUTE/STANDBY LED is lit, this means that the power is turned off from the remote control unit. Turn the power on from the remote control unit.

HINWEIS:
1. Lassen Sie den Netzschalter (POWER) am Hauptgerät stets eingeschaltet.
2. Schalten Sie den Strom mit dem Fernbedienungsgerät ein–und aus.
3. Trennen Sie das Netzkabel vom Netz ab, wenn Sie beabsichtigen, das Gerat über einen längeren Zeitraum hinweg nicht zu benutzen.

VORSICHT:
Wenn nur das Stummschalt–/Bereitschafts–LED (MUTE/STANDBY) leuchtet, so bedeutet dies, daß der Strom vom Fernbedienungsgerät aus ausgeschaltet worden ist. Schalten Sie den Strom vom Fernbedienungsgerät aus ein.

REMARQUE:
1. S'assurer que le commutateur d'alimentation (POWER) sur l'unite principale soit toujours dans la position activée.
2. Allumer et éteindre l'appareil avec la télécommande.
3. Débrancher le cordon d'alimentation lorsque l'appareil ne sera pas utilisé pendant une longue période.

ATTENTION:
Si seul le témoin (LED) de sourdine/veille (MUTE/STANDBY) est allumé, cela signifie que l'appareil est mis hors circuit par la télécommande. Allumer l'appareil avec la télécommande.

NOTA:
1. Tenete sempre l'interruttore della corrente (POWER) dell'unità principale nella posizione di attivazione.
2. Accendete e spegnete la corrente usando il telecomando.
3. Scollegate il filo di alimentazione quando avete intenzione di non usare l'apparecchio per un lungo periodo.

AVVERTENZE:
Se sono illuminati solo i LED di attenuazione/attesa (MUTE/STANDBY), questo significa che la corrente e' stata spenta con il telecomando. Riaccendete la corrente usando il telecomando.

NOTA:
1. Mantenga siempre activado el interruptor de alimentación (POWER) en la unidad principal.
2. Encienda y apague el equipo desde la unidad de control remoto.
3. Cuando la unidad vaya a estar fuera de uso por un período prolongado de tiempo, desconecte el cable de alimentación.

PRECAUCION:
Cuando solo el indicador LED de silenciamiento/modo de espera (MUTE/STANDBY) esté encendido, significará que la alimentación a la unidad ha sido desconectada desde la unidad de control remoto. Conecte la alimentación desde la unidad de control remoto.

OPMERKING:
1. Zorg er altijd voor dat de stroomschakelaar (POWER) van het hoofdtoestel in de ingeschakelde stand staat.
2. Schakel de stroom in en uit m b v de afstandsbediening.
3. Trek het netsnoer uit wanneer u denkt het toestel gedurende een lange periode niet te gebruiken.

WAARSCHUWING:
Indien enkel de dempings–(MUTE)/STANDBY LED brandt, betekent dit dat de spanning met de afstandsbediening is uitgeschakeld. Schakel de spanning in met de afstandsbediening.

OBSERVERA:
1. Låt alltid strömbrytaren (POWER) på huvudenheten vara påslagen.
2. Slå till/från strömmen med hjälp av fjärrkontrollen.
3. Koppla loss nätkabeln om apparaten inte skall användas under lång tid.

VARNING:
Om endast MUTE/STANDBY–lampan lyser betyder det att strömmen har stängts av via fjärrkontrollen. Strömmen måste då slås på via fjärrkontrollen igen.

NOTA:
1. Mantenha o interruptor da Corrente (POWER) na unidade principal sempre ligado.
2. Ligue e desligue a corrente a partir da unidade de controlo remoto.
3. Desconecte o fio de força quando intentar não utilizar a unidade por longo tempo.

CAUTELA:
Se apenas se iluminar o LED de surdina/espera (MUTE/STANDBY), isto significa que a força se desligou a partir do controle remoto. Ligue a força a partir do controle remoto.

註：
1. 主機上的POWER（電源）掣須一直保持接通。
2. 由遙控器操縱電源之開和關。
3. 本機打算長時間不用時應將電源接線拔下。

注意：
若只有MUTE/STANDBY LED指示燈亮，就表示電源已由遙控器關閉。應從遙控器開啟電源。

PRECAUTIONS FOR INSTALLATION
Leave at least 10cm of space between this unit and any other component placed above.

SICHERHEITSMASSNAHMEN BEIM EINBAU
Lassen einen Mindestabstand von 10 cm zwischen diesem Gerät und der anderen Komponente, die daraufgestellt wird.

PRECAUTIONS D'INSTALLATION
Prévoir un espace d'au moins 10cm entre l'unité et tout autre appareil se trouvant au–dessus.

PRECAUZIONI PER L'INSTALLAZIONE
Lasciate uno spazio libero di almeno 10 cm fra quest'unità e qualsiasi altro componente che è collocato sopra la stessa.

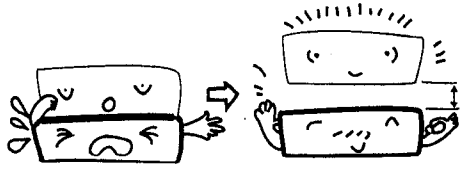
PRECAUCIONES PARA LA INSTALACION
Deje por lo menos 10 cm. de espacio entre esta unidad y cualquier otro componente situado sobre ella.

VOORZORGSMAATREGELEN
Bij plaatsing dient u een ruimte van minstens 10 cm open te laten tussen dit toestel en een ander erop geplaatst komponent.

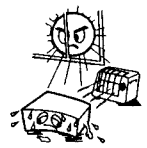
FÖRSIKTIGHETSÅTGÄRDER VID INSTALLATIONEN
Se till att det finns minst 10 cm mellanrum mellan apparaten och en ev. annan apparat som ställs ovanpå.

CUIDADOS NA INSTALAÇÃO
Deixe um espaço de pelo menos 10 cm entre esta unidade e qualquer outro componente colocado acima.

安裝注意
本機須與其上方擺置的其它音響設備相隔至少10厘米。



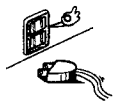
NOTE ON USE / HINWEISE ZUM GEBRAUCH / OBSERVATIONS RELATIVES A L'UTILISATION NOTE SULL'USO / NOTAS SOBRE EL USO / ALVORENS TE GEBRUIKEN / OBSERVERA OBSERVAÇÕES QUANTO AO USO



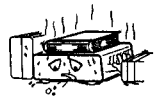
- Avoid high temperatures
  Allow for sufficient heat dispersion when installed on a rack.
- Vermeiden Sie hohe Temperaturen
  Beachten Sie, daß eine ausreichend Luftzirkulation gewährleistet wird, wenn das Gerät auf ein Regal gestellt wird.
- Eviter des températures élevées.
  Tenir compte d'une dispersion de chaleur suffisante lors de l'installation sur une étagère.
- Evitate di esporre l'unità a temperature alte
  Assicuratevi che ci sia un'adeguata dispersione del calore quando installate l'unità in un mobile per componenti audio.
- Evite altas temperaturas.
  Permita la suficiente dispersión del calor cuando está instalado en la consola.
- Vermijd hoge temperaturen.
  Zorg voor een degelijk hitteafvoer indien het apparaat op een rek wordt geplaatst.
- Undvik höga temperaturer.
  Se till att det finns möjlighet till god värmeavledning vid montering i ett rack.
- Evite temperaturas altas
  Conceda suficiente dispersão de calor quando o equipamento for instalado numa prateleira.

- Handle the power cord carefully.
  Hold the plug when unplugging the cord.
- Gehen Sie vorsichtig mit dem Netzkabel um.
  Halten Sie das Kabel am Stecker, wenn Sie den Stecker herausz ehen.
- Manipuler le cordon d'alimentation avec précaution.
  Tenir la prise lors du débranchement du cordon.
- Maneggiate il filo di alimentazione con cura.
  Agite per la spina quando scollegate il cavo dalla presa.
- Maneje el cordón de energía con cuidado
  Sostenga el enchufe cuando desconecte el cordón de energía.
- Hanteer het netsnoer voorzichtig.
  Houd het snoer bij de stekker vast wanneer deze moet worden aan– of losgekoppeld.
- Hantera nätkabeln varsamt.
  Håll i kabeln när den kopplas från el–uttaget.
- Manusear com cuidado o fio condutor de energia.
  Segure a tomada ao desconectar o fio.

- Keep the set free from moisture, water, and dust.
- Halten Sie das Gerat von Feuchtigkeit, Wasser und Staub fern.
- Protéger l'appareil contre l'humidité, l'eau et la poussière.
- Tenete l'unità lontana dall'umidità, dall'acqua e dalla polvere.
- Mantenga el equipo libre de humedad, agua y polvo.
- Laat geen vochtigheid, water of stof in het apparaat binnendringen.
- Utsatt inte apparaten för fukt, vatten och damm.
- Mantenha o aparelho livre de qualquer umidade, água ou poeira.



- Unplug the power cord when not using the set for long periods of time.
- Wenn das Gerät e ne langere Zeit nicht verwendet werden soll, trennen Sie das Netzkabel vom Netzstecker.
- Débrancher le cordon d'alimentation lorsque l'appareil n'est pas utilise pendant de longues périodes.
- Disinnestate il filo di alimentazione quando avete l'intenzione di non usare il filo di alimentazione per un lungo periodo di tempo.
- Desconecte el cordón de energía cuando no utilice el equipo por mucho tiempo.
- Neem altijd het netsnoer uit het stopkontakt wanneer het apparaat gedurende een lange periode niet wordt gebruikt.
- Koppla ur nätkabeln om apparaten inte kommer att användas i lång tid.
- Desligue o fio condutor de força quando o aparelho não tiver que ser usado por um longo período.



*(For sets with vent lation holes)

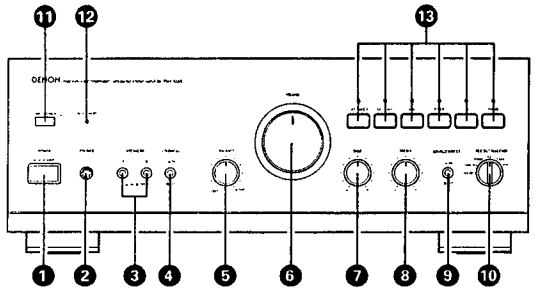
- Do not obstruct the ventilation holes.
- Die Belüftungsoffnungen dürfen nicht verdeckt werden.
- Ne pas obstruer les trous d'aération.
- Non coprite i fori di ventilazione.
- No obstruya los orificios de ventilación.
- De ventilatieopeningen mogen niet worden geblokkeerd.
- Täpp inte till ventilationsöppningarna.
- Não obstrua os orifícios de ventilação.

- Do not let foreign objects in the set.
- Keine fremden Gegenstände in das Gerät kommen lassen.
- Ne pas laisser des objets étrangers dans l'appareil.
- E' importante che nessun oggetto è inserito all'interno dell'unità.
- No deje objetos extraños dentro del equipo.
- Laat geen vreemde voorwerpen in dit apparaat vallen.
- Se till att främmande föremål inte tränger in i apparaten.
- Não deixe objetos estranhos no aparelho.

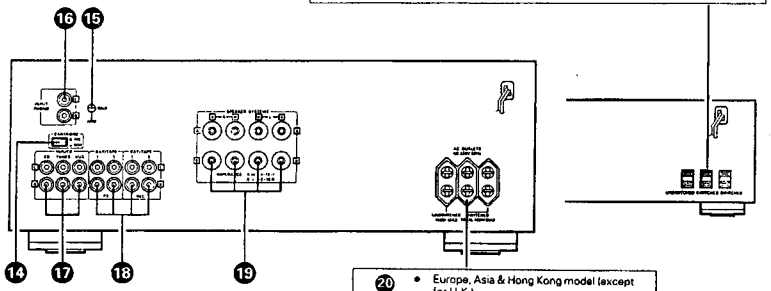
- Do not let insecticides, benzene, and thinner come in contact with the set.
- Lassen Sie das Gerät nicht mit Insektiziden, Benzin oder Verdünnungsmitteln in Berührung kommen.
- Ne pas mettre en contact des insecticides, du benzène et un diluant avec l'appareil.
- Assicuratevi che l'unità non venga in contatto con insetticidi, benzolo o solventi.
- No permita el contacto de insecticidas, gasolina y diluyentes con el equipo.
- Laat geen insektenverdelgende middelen, benzine of verfverdunner met dit apparaat in kontakt komen.
- Se till att inte insektsmedel på spraybruk, bensen och thinner kommer i kontakt med apparatens höljе.
- Não permita que inseticidas, benzina e dissolvente entrem em contacto com o aparelho.

- Never disassemble or modify the set in any way.
- Versuchen Sie niemals das Gerät auseinander zu nehmen oder auf jegliche Art zu verändern.
- Ne jamais démonter ou modifier l'appareil d'une manière ou d'une autre.
- Non smontate mai, nè modificate l'unità in nessun modo.
- Nunca desarme o modifique el equipo de ninguna manera.
- Nooit dit apparaat demonteren of op andere wijze modifieren.
- Ta inte isär apparaten och försök inte bygga om den.
- Nunca desmonte ou modifique o aparelho de alguma forma.

FRONT PANEL
FRONTPLATTE
PANNEAU AVANT
PANNELLO ANTERIORE
正面



REAR PANEL
RÜCKWAND
PANNEAU ARRIERE
PANNELLO POSTERIORE
背面



⑳
- U.S.A., CANADA, TAIWAN R.O.C. Model
- Modell für USA, KANADA, TAIWAN R.O.C.
- Modèle pour U.S.A., CANADA, TAIWAN R.O.C.
- Modello per i Stati Uniti, il CANADA e TAIWAN
- 美國、加拿大、台灣R.O.C.型號

⑳
- Europe, Asia & Hong Kong model (except for U.K.)
- Modell für Europa, Asien & Hong Kong (außer Großbritannien).
- Modèle pour Europe, Asie et Hongkong (sauf Royaume-Uni)
- Modello per l'Europa, l'Asia e Hong Kong (all'infuori del Regno Unito).
- 歐洲及亞洲及香港型號（除英國外）

Fig. 1
Abb. 1
圖1

⑭ CARTRIDGE	⑮ GND	⑯ PHONO	⑰ CD, TUNER, AUX	⑱ DAT/TAPE-1, DAT/TAPE-2 • TAPE PB • TAPE REC	⑲ SPEAKERS
Cartridge Selector Switch	GND	Phono Input Terminals (Phono)	Input Terminals (CD, TUNER, AUX)	Playback and Recording Terminals • Playback Terminals • Recording Terminals	Speaker Terminals
Tonabnehmer-Wahlschalter	GND	Schallplattenspieler-Eingangsbuchsen (Phono)	Eingangsbuchsen (CD, TUNER, AUX)	Tonband-Ein / Ausgänge • Wiedergabe • Aufnahme	Lautsprecher-klemmen
Selecteur de cellule	GND	Bornes d'entrée (phono)	Bornes d'entrée (CD, TUNER, AUX)	Bornes de lecture et d'enregistrement • Bornes de lecture • Bornes d'enregistrement	Bornes de haut-parleurs
Interruttore di selezione cartuccia	GND	Terminali di ingresso Phono	Terminali di ingresso (CD, TUNER, AUX)	Terminali di riproduzione registrazione • Terminali di riproduzione • Terminali di registrazione	Terminali degli altoparlanti
唱頭選擇開關	地線	唱盤輸入端子（唱機）	輸入端子（CD、調諧器、AUX）	播放與錄音端子 • 播放端子 • 錄音端子	揚聲器端子

CONNECTIONS
ANSCHLÜSSE
CONNEXIONS
CONNESSIONI
聯接方法

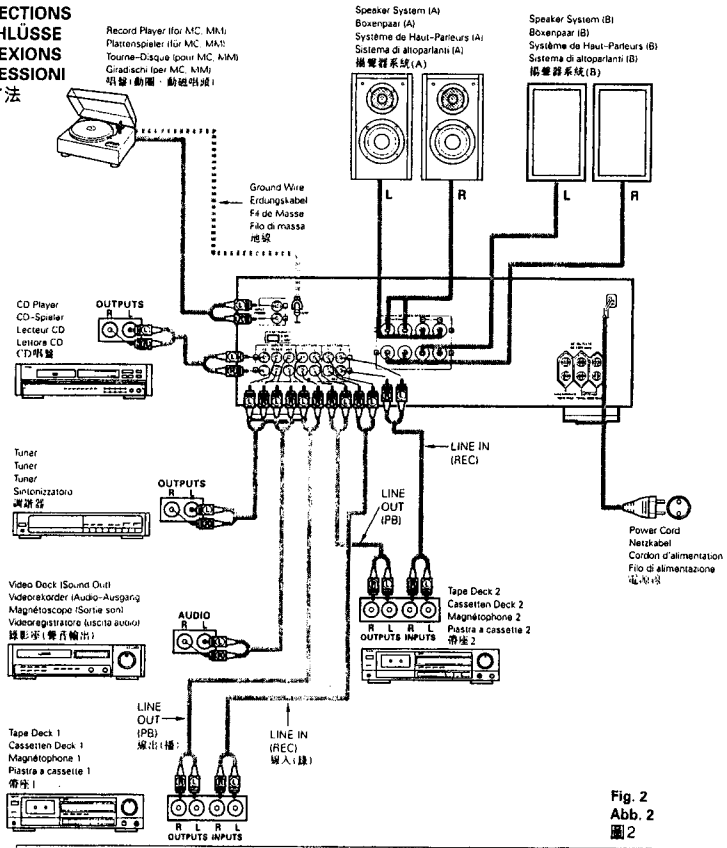


Fig. 2
Abb. 2
圖2

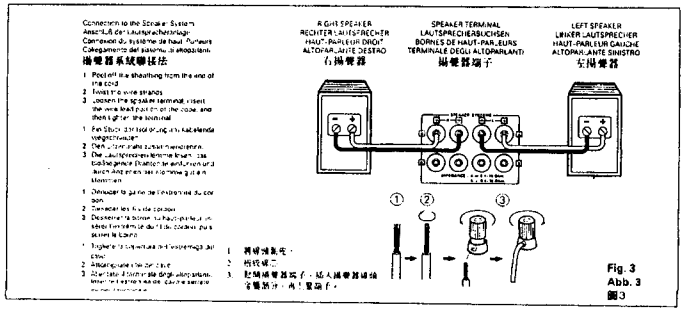


Fig. 3
Abb. 3
圖3

DESIGNATIONS AND FUNCTIONS OF PANEL CONTROLS

❶ POWER (Power Switch)
When the power switch is turned ON (▬), the MUTE/STAND-BY LED ⓬ lights.
When the power switch is turned ON, power is supplied to the unit. It takes a few seconds after the power is turned on for the unit to warm up. This is due to the built-in muting circuit that eliminates noise during the on/off operation.

❷ PHONES (Headphone Jack)
This jack is used to plug in the headphones.

❸ SPEAKERS (Speaker Selection Switch)
The PMA-925R/725R can be connected to two speaker systems: speaker system A and speaker system B.
When A is pressed, the speaker system connected to speaker output terminals A operates.
When B is pressed, the speaker system connected to speaker output terminals B operates.
When A and B are pressed on together, both speaker systems operate simultaneously. When the A and B switches are both off (in the out position), there is no output from the speaker terminals. This setting is used to listen to playback through the headphones.

❹ LOUDNESS (Loudness Switch)
When the volume is low, it is difficult for the human ear to clearly distinguish notes in the low and high frequency ranges. The loudness switch allows a simple "one-touch" correction of this difficulty. Press the loudness switch ON (▬) when listening to music at a low volume. The low notes and high notes will be corrected to produce a natural sound.

❺ BALANCE (Balance Control)
This knob is used to adjust the balance between the left and right channels. When it is set to the center position, the amplitude of the amplifier is equal on both sides. If there is a difference in the left and right channel output voltages for a cartridge, move the knob to the left and the right to adjust it. If the volume on the right side is too low, turn the knob to the right (↷). If the volume on the left side is too low, turn the knob to the left (↶). This will achieve an even balance on the left and right sides.

❻ VOLUME (Volume Control)
This knob controls the overall volume level.
Turn the knob to the right (↷) to raise the volume and to the left (↶) to lower it.

❼ BASS (Bass Control)
This knob is used to control the bass quality of the sound.
When the knob is set at the center position, the frequency characteristics are flattened in the range below 1000 Hz. The bass is emphasized as the knob is moved off center to the right (↷), and reduced as it is moved to the left (↶).
When volume control ❻ is set to the right of the center position, the effect of the other controls is reduced.

❽ TREBLE (Treble Control)
This knob is used to control the treble quality of the sound.
When the knob is set at the center position, the frequency characteristics are flattened in the range above 1000 Hz. The treble is emphasized as the knob is moved off center to the right (↷), and reduced as it is moved to the left (↶).
When volume control ❻ is set to the right of the center position, the effect of the other controls is reduced.

❾ SOURCE DIRECT (Source Direct Switch)
The controls (BALANCE, LOUDNESS, and TONE) can be used when this switch is in the OFF (▬) position.
When set to the ON (▬) position, the above controls are by-passed and the signals are input directly to the volume control circuit, providing high quality sound.

❿ REC OUT SELECTOR (Rec Out Select Switch)
Use this switch to select the recording component.
- PHONO: Used to recording from the turntable.
- CD: Used to recording from the CD player.
- TUNER: Used to recording from the tuner
- AUX: Used to recording component that connected to the AUX terminal.
- DAT/TAPE-1 ▶ 2: Used to recording from the tape deck connected to the DAT/TAPE-1 jacks
- DAT/TAPE-2 ▶ 1: Used to recording from the tape deck connected to the DAT/TAPE-2 jacks.

⓫ REMOTE SENSOR (Remote Control Sensor)
This sensor receives the infra-red light transmitted from the wireless remote control unit.
For remote control, point the wireless remote control unit towards the sensor.

⓬ MUTE / STANDBY LED
This LED flashes while the muting circuit is activated when the power is turned on and when muting is turned on from the remote control unit, and remains lit (without flashing) while the power is on.

⓭ INPUT SELECTOR (Input Select Switch)
Use these to select the program source.
When the button for the desired program source is selected, its LED lights. One program source only can be selected at a time, as follows:
- PHONO: Used to select the output from a turntable that is connected to the PHONO terminal. Use the PHONO switch ⓮ (Rear Panel Side) to switch the sensitivity to correspond to the cartridge type being used.
- CD: Used to listen a compact disc player or other component that is connected to the CD terminal.
- TUNER: Used to play a component such as an FM/AM tuner or a TV tuner that is connected to the TUNER terminal.
- AUX: Used to play a component such as a Hi Fi video player, TV tuner, 8-track tape player or tape deck that is connected to the AUX terminal.
- DAT/TAPE-1: Use this Position when using the tape deck, etc., connected to the DAT/TAPE-1 jacks.
- DAT/TAPE-2: Use this Position when using the tape deck, etc., connected to the DAT/TAPE-2 jacks.

⓮ PHONO (Cartridge Selection Switch): Rear Panel Side
This switch is set according to the type of player cartridge to be used.
- MC (▬): Used when an MC (moving-coil) cartridge with an output of less than 0.5 mV is used.
- MM (▬): Used when an MM (moving-magnet) cartridge with an output of 2 mV or more is used.

⓴ AC OUTLETS: Rear Panel Side
- **For U.S.A., Canada, and Taiwan R.O.C. models.**
  AC outlets are used for connecting amplifier component units, such as tuner, turntable, tape deck, etc.
  - SWITCHED (Total capacity: 120 W):
    These outlets are turned ON/OFF when main power switch and POWER button on the Remote Control Unit is turned on/off.
  - UNSWITCHED (Capacity: 240 W)
    This outlet is always ON whether power switch is on or OFF
- **For Europe (except the U.K.), Asia and Hong Kong models.**
  AC outlets are used for connecting amplifier component units, such as tuner, turntable, tape deck, etc.
  - SWITCHED (Total capacity: 100 W):
    These outlets are turned ON/OFF when main power switch and POWER button on the Remote Control Unit is turned on/off.
  - UNSWITCHED (Capacity: 100 W)
    This outlet is always ON whether power switch is on or OFF.

OPERATION

PREPARATION

1. CHECKING CONNECTIONS
- Make sure that all the connections are proper by referring to the back panel. (Fig. 2, 3)
- Check the polarity (positive and negative) of connections, and the directivity of stereo separation (right cord to right channel terminal, and left cord to left channel terminal).
- Check the directivity of pin cord connection.

2. SETTING OF EACH KNOB
- Turn the volume control knob counterclockwise, to "0".
- Set the rotary knob to "flat".
- Set SOURCE DIRECT and LOUDNESS to "OFF (▬)".

After checking the above items, turn on the power, the amplifier is set in the ready mode in a few seconds.

PLAYING A RECORD
1. Set the INPUT SELECTOR switch to "PHONO".
2. Operate the turntable and play the record.
3. Turn the volume and tone controls to yield an appropriate volume and sound quality.

PLAYBACK OF CD PLAYER
1. Set the INPUT SELECTOR switch to "CD".
2. Operate the CD player.
3. Turn the volume and tone controls to yield an appropriate volume and sound quality.

RECEPTION OF RADIO PROGRAMS
1. Set the INPUT SELECTOR switch to "TUNER".
2. Operate the tuner to receive a radio program.
3. Turn the volume and tone controls to yield an appropriate volume and sound quality.

CONNECTIONS OF AUDIO EQUIPMENT TO AUX TERMINALS
1. Set the INPUT SELECTOR switch to "AUX" Position.
2. Operate the Audio equipment Systems.
3. Turn the volume and tone controls to yield an appropriate volume and sound quality.

PLAYBACK WITH TAPE DECK
1. Set the INPUT SELECTOR switch to "DAT/TAPE-1" or "DAT/TAPE-2".
2. Operate the Tape Deck.
3. Turn the volume and tone controls to yield an appropriate volume and sound quality.

RECORDING WITH TAPE DECK
1. Set the REC OUT SELECTOR to the program source you wish to record.
2. Start the playback of the program source.
3. Start recording with the component connected to "DAT/TAPE-1" or "DAT/TAPE-2".

- In the PMA-925R/725R, the REC OUT signal and the speaker (headphone) signal are output via separate circuits so that knobs and switches related to the tone and volume have no effect whatsoever on the sound that is recorded. Also, since the recording function is selected by the REC OUT SELECTOR, the free program source can be played through the speakers (or headphones) even during recording.

- **MONITORING THE RECORDING**
  A recording in progress can be monitored if a tape deck with three individual heads for recording and playback is used. A tape deck in which a common head is used for both recording and playback cannot be used to monitor recording. When a recording is being made using DAT/TAPE-1, selecting DAT/TAPE-1 with the INPUT SELECTOR will engage the RECORDING MONITOR and permit a check of the recording condition.

CAUTION

> **Protective Circuit**
> This set is equipped with a high speed protective circuit. This circuit protects the internal circuitry from damage due to large currents flowing when the speaker jacks are not completely connected or when an output is generated by a short circuit. This protective circuit's operation cuts off the output to the speakers. In such a case, be sure to turn the power to the set off and check the connections to the speakers. Then turn the power on again. After muting for several seconds, the set will operate normally.

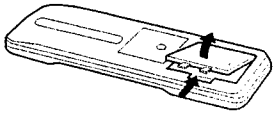
NOTE
- This amplifier has a full memory back-up system. When the power is turned on, INPUT SELECTOR ⓭ are set to the last mode set before the power was turned off.

REMOTE CONTROL OPERATION

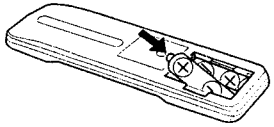
The accessory Remote Control Unit is used to control the amplifier from a convenient distance.

(1) Inserting the Dry Cell Batteries

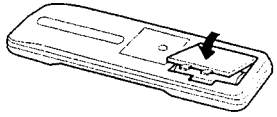
1. Remove the battery cover on the Remote Control Unit.



2. Insert two dry cell batteries as shown in the diagram on the battery supply unit.



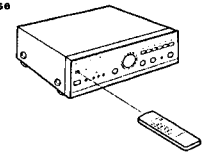
3. Replace the battery cover.



Notes on Battery Usage

- RC-176 uses the size R6P (AA) dry cell batteries.
- The batteries will need to be replaced approximately once a year. This will depend upon how often the Remote Control Unit is used.
- If, in less than a year from the time new batteries were inserted, the Remote Control Unit fails to operate the Amplifier from a near-by position, it is time to replace the batteries.
- Insert the batteries properly, following the polarity diagram inside the battery compartment.
- Batteries are prone to damage and leakage. Therefore:
  - Do not mix new batteries with used ones.
  - Do not mix different types of batteries.
  - Do not jumper opposite poles of the batteries, expose them to heat, break them open, nor expose them to open fire.
- If the batteries have leaked, remove any traces of battery fluid from the battery compartment wiping thoroughly with a dry cloth. Then insert new batteries.

(2) Directions for use



- Operate the Remote Control Unit while pointing it towards the Remote Control Sensor on the Amplifier as shown in the diagram on the left.
- The Remote Control Unit can be used at distances up to about 8 meters in a straight line from the amplifier. This distance will decrease if there are obstructions blocking the infra-red light transmission or if the Remote Control Unit is not directed straight at the amplifier.

Note on operation

- Do not press the operating buttons on the Amplifier and the Remote Control Unit at the same time. This will cause misoperation.
- Operation of the Remote Control Unit will become less effective or erratic if the infrared Remote Control Sensor on the Amplifier is exposed to strong light or if there are obstructions between the Remote Control Unit and the sensor.
- In case you operate a VCR, TV or other components by remote control, do not operate buttons on two different remote control units at the same time. This will cause misoperation.

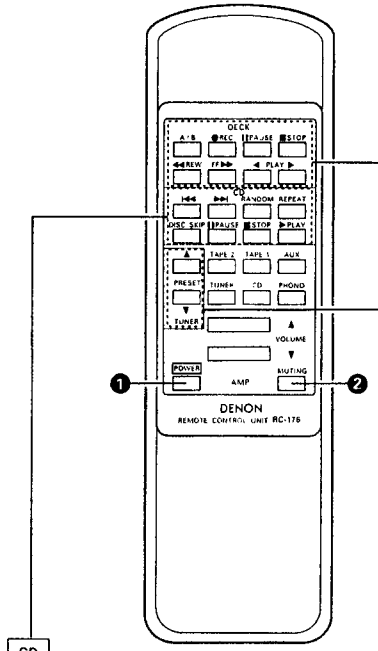
Besides being able to operate the PMA-925R / 725R amplifier with this Remote Control Unit, you can also operate a DENON cassette deck and CD player from this handy full-system Remote Control Unit.

Remote control section

Full-system Remote Control Unit

The full-system Remote Control Unit operates all major functions of the Amplifier, such as function switching, volume control. But that's not all! The same control pad can also control the major functions of a DENON CD player and cassette deck and tuner when combined with the PMA-925R / 725R to create a remarkably ergonomic and versatile DENON system with all the quality sound reproduction that the devoted audiophile expects.

Remote Control Unit RC-176 supplied with the PMA-925R / 725R



❶ **POWER button**

This button can be used to turn on and off the power of the amplifier.

However, the power for the amplifier turned on and off if it is in the power standby mode and the power cord is plugged in.

This button will not function if there is a power failure, if the power cord is not plugged in, or when using an audio timer.

❷ **MUTING button**

Pressing this switch will activate the muting condition and no signals will be output to the speakers.

Other buttons

Other buttons are exclusively for the PMA-925R / 725R, and function in the same way as the corresponding buttons on the set.

DECK

▶ PLAY	PLAY button
◀ PLAY (REV)	PLAY (REV) button
■ STOP	STOP button
◀◀ REW	REWIND button
FF ▶▶	FF button
● REC	Refer to the operating instructions of your DENON tape deck.
❚❚ PAUSE	
A / B W-DECK	A/B DECK SELECT button

CD

▶ PLAY	PLAY button
■ STOP	STOP button
I◀◀	Reverse Track Search button
▶▶I	Forward Track Search button
RANDON	Refer to the operating instructions of your DENON CD player
REPEAT	
DISC SKIP	
❚❚ PAUSE	PAUSE button

TUNER

PRESET ▲▼ buttons

Press this button to move up or down among the preset station numbers.

- The RC-176 Remote Control Unit can control CD players and cassette decks manufactured by DENON.
- Note that operation may not be possible for some models.
- Buttons are conveniently separated into groups, each group controlling one specific component. The groups are AMP, FUNCTION, CD, DECK and TUNER etc..

For details on operating other components, refer to the operating instructions for the CD player and/or cassette deck.

CAUTION:

- If the power is turned off with the Remote Control Unit, the set is switched to the power stand-by state. If you are absent for a long period of time, unplug the power cord.
- Only the MUTE/STANDBY LED ⓭ lights when in the power stand-by mode.
- You may experience erratic operation of the Remote Control Unit if it is operated in fluorescent light and direct sunlight, in particular if this light strikes the Remote Control Sensor on the Amplifier. However, this is not a malfunction, and if this should happen, simply protect the sensor against such light.

Technical Data (typical value)	Technische Daten (typische werte)	Caractéristiques techniques (valeur caractéristique)	PMA-925R / 725R
• POWER AMPLIFIER SECTION	• LEISTUNGSENDS VERSTÄRKER	• PARTIE AMPLIFICATEUR DEPUISSANCE	
Rated Output Power:	Nenn-Ausgangsleistung:	Puissance nominale:	
*1Both channel driven (8 Ω/ohm Load) 20 Hz to 20 kHz, T.H.D 0.02%/0.05% (4Ω/ohm Load) DIN, 1 kHz, T.H.D. 0.7%	*1Beide Kanäle betroebem (an 8 Ω/Ohm) 20 Hz bis 20 kHz,T.H.D 0,02%/0,05% (an 4 Ω/Ohm) DIN, 1 kHz, T.H.D. 0,7%	*1Entraînement deux canaux (charge 8 Ω/ohms) 20 Hz à 20 Hz, D.H.T. 0,02%/0,05% (charge 4 Ω/ohms) DIN, 1 kHz, D.H.T. 0,7%	80W + 80W/65W + 65W 130W + 130W/100W + 100W
*2Continuous 80W/65W per channel min into 8 Ω/ohms from 20 Hz to 20 kHz with no more than 0.02%/0.05% total harmonic distortion	*2Fortlaufend 80W/65W pro Kanal min. zu 8 Ω/Ohm von 20 Hz bis 20 kHz mit einem Gesamtklirfaktor von nicht mehr als 0,02%/0,05%	*280W/65W an continu par canal sur min. 8 Ω/ohms de 20 Hz à 20 kHz avec une distorsion harmonique totale de 0,02%/0,05% ou moins.	80W/65W
Total Harmonic Distortion: (–3 dB at rated output, 8 Ω/ohms)	Gesamtklirrfaktor: (–3 dB bei Nennausgang, 8 Ω/Ohm)	Distorsion harmonique totale: (–3 dB à la sortie nominale, 8 Ω/ohms)	0.007%
• PRE AMPLIFIER SECTION	• VORVERSTÄRKER	• PRE-AMPLI	
Rated Output: (Recout Terminal)	Nenn-Ausgangsleistung: (Aufnahme-Ausgangsbuchse)	Puissance nominale: (Borne de sortie d'enregistrement)	150 mV
Input Sensitivity/ Input Impedance:	Eingangsempfindlichkeit/ Eingangsimpedanz:	Sensibilité d'entrée/ Impédance d'entrée:	
PHONO:	PHONO:	PHONO:	MM 2.5 mV/47 kΩ/kohm MC 200 μV/100 Ω/ohm 150 mV/47 kΩ/kohm
CD, TUNER AUX TAPE–1, TAPE–2:	CD, TUNER, AUX TAPE–1, TAPE–2:	CD, TUNER, AUX TAPE–1, TAPE–2:	
RIAA Deviation: PHONO: Within ±0.3 dB	Abweichung von der RIAA–Kennlinie: PHONO: Innerhalb ±0,3 dB	Variation RIAA: PHONO: Inf. à ±0,3 dB	20 Hz ~ 20 kHz
Maximum Input:	Maximaler Eingang:	Entrée max.:	PHONO MM 160 mV/1 kHz MC 12mV/1 kHz
• OVERALL CHARACTERISTICS	• GESAMTEIGENSCHAFTEN	• CARACTERISTIQUES GENERALES	
SN Ratio (IHF A Network):	Signal/Rauschabstand (IHF–A–Weichel):	Rapport signel/bruit (réseau IHF A):	
(Input terminals shortcircuited)	(Eingange kurzgeschlossen)	(Bornes d'entrée court–circuitées)	PHONO: MM: 94 dB (at 5 mV input) MC: 76 dB (at 0.5 mV input)
SOURCE–DIRECT: ON	SOURCE DIRECT: ON	SOURCE DIRECT: ON	CD, TUNER, AUX TAPE–1, TAPE–2: 107 dB
Tone Control Adjustable Range:	Klangregelbereich:	Gamme de réglage de tonalité:	
BASS	TIEFEN (BASS)	GRAVES	100 Hz ±8 dB
TREBLE	HÖHEN (TREBLE)	AIGUS	10 kHz ±8 dB
Loudness:	Gehörrichtige Lautstärke:	Compensation physiologique:	100 Hz + 7 dB 10 kHz + 6 dB
• OTHERS	• SONSTIGES	• AUTRES	
Power Supply	Netzspannung und- frequenz	Alimentation	AC230V/50 Hz (For Europe, Asia and Hong Kong models) AC120V/60 Hz (For U.S.A., Canada, and Taiwan R.O.C. models)
AC Outlets Switched × 2:	Wechselstrom-Ausgänge Geschaltet × 2:	Prises secteur (AC) Commutées × 2:	100W (Total) (For Europe (except the U.K.), Asia and Hong Kong models) 120W (Total) (For U.S.A., Canada, and Taiwan R.O.C. models)
Unswitched × 1:	Ungeschaltet × 1:	Non commutées × 1:	100W (For Europe (except the U.K.), Asia and Hong Kong models) 240W (For U.S.A., Canada, and Taiwan R.O.C. models)
Power Consumption	Leistungsaufnahme	Consommation	230W/210W (IEC) 4.2A/3.6A (U.S.A. and Canada models)
Dimensions × (W) × (H) × (D)	Abmessungen (B) × (H) × (T)	Dimensions (L) × (H) × (D)	434(W) × 162(H) × 346(D)mm PMA–925R (17–3/32" × 6–3/8" × 13–5/8") 434(W) × 142(H) × 346(D)mm PMA–725R (17–3/32" × 5–19/32" × 13–5/8")
Net Weight REMOTE CONTROL UNIT (RC–176)	Nettogewicht FERNBEDIENUNGSGERÄT (RC–176)	Poids UNITE DE TELECOMMANDE (RC–176)	11 kg (24 lbs 4oz) / 9.6 kg (21 lbs 3oz)
Remote control system: Infrared pulse system	Fernbedienungs–System: Infrarot–Impulse	Système de télécommande: Système à impulsion infrarouge	
Power supply: 3V DC, Two size R6P ("AA") dry cell batteries	Stromversorgung: 3V Gleichstrom, zwei Trockenzelle–Batterien vom format R6P (AA)	Alimentation: 3V CC, deux piles sèches de format R6P ("AA")	
External dimensions:	Äußere Abmessungen:	Dimensions extérieures:	55(W) × 194(H) × 18(D)mm 2–11/64" × 7–41/64" × 45/64")
Weight:	Gewicht:	Poids:	100 g (about 3.5 oz) (including batteries)

Note: *1 For Europe, Asia and Hong Kong
*2 For U.S.A., Canada, and Taiwan R.O.C

Hinweis: *1 Für Europa, Asien und Hong Kong
*2 Für USA, Kanada, und Taiwan R.O.C.

Note: *1 Pour Europe, Asie et Hongkong
*2 Pour U.S.A., Canada, et Taiwan R.O.C.

- Specifications and contents are subject to change without notice for purposes of improvement.
- Änderungen des Inhalts und der technischen Daten zum Zwecke der Verbesserung vorbehalten.
- Spécifications et contenu sont sujets à modification sans préavis.

ENGLISH

Please check to make sure the following items are included with the main unit in the carton:

(1) Operating Instructions 1
(2) Remote Control Unit (RC–176) 1
(3) Batteries R6P (AA) 2

DEUTSCH

Bitte überprüfen Sie, ob die folgenden Teile vollständig in der Verpackung enthalten sind:

(1) Bedienungsanleitung 1
(2) Fernbedienung (RC–176) 1
(3) Batterien vom Typ R6P (AA) 2

FRANCAIS

Veuillez contrôler que les articles suivants sont bien joints à l'appareil principal dans le carton:

(1) Mode d'emploi 1
(2) Unité de télécommande (RC–176) 1
(3) Piles R6P (AA) 2

ITALIANO

Controllare che le parti seguenti si trovino imballate con l'apparecchio nella scatola di spediziione.

(1) Libretto delle istruzioni 1
(2) Telecomando (RC–176) 1
(3) Batterie R6P (AA) 2

MEMO:

ESPAÑOL

Por favor verifique asegurandose de que los siguientes artículos son empacados en la caja pero separados de la unidad principal.

(1) Manual de instrucciones 1
(2) Unidad de control remoto (RC–176) 1
(3) Pilas R6P (AA) 2

NEDERLANDS

Kontroleer of de volgende accessoires bij het hoofdtoestel in de doos zijn verpakt:

(1) Gebruiksaanwijzing 1
(2) Afstandsbediening (RC–176) 1
(3) Batterijen R6P (AA) 2

SVENSKA

Kontrollera att följande, förutom huvudapparaten, finns med i kartongen.

(1) Bruksanvisning 1
(2) Fjärrkontroll (RC–176) 1
(3) Batterier R6P (AA) 2

PORTUGUÊS

Certifique–se de que as seguintes peças estão incluídas na embalagem fora da unidade principal:

(1) Instruções de operação 1
(2) Unidade de controle remoto (RC–176) 1
(3) Baterias R6P (AA) 2

中 文

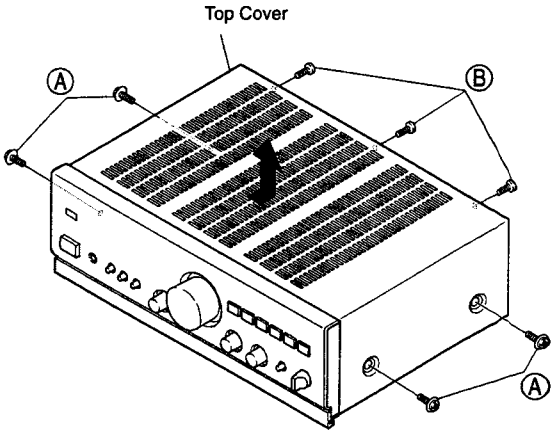
下列物品隨主機一起包裝於紙箱內，請查對：

(1) 操作說明書 1
(2) 遙控器(RC–176) 1
(3) 電池R6P(AA) 2

REMOVAL OF EACH SECTION

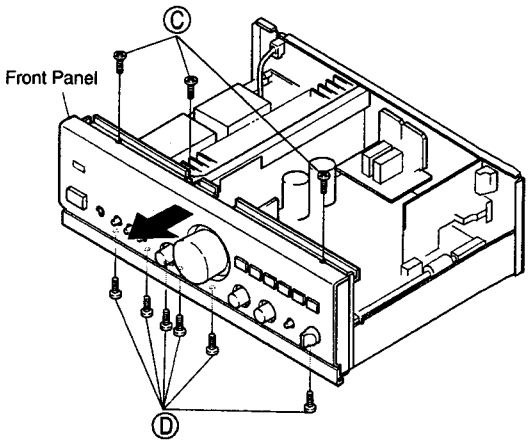
● Top Cover

1) Remove 4 screws (A) and 3 screws (B) .
2) Pull up Top Cover in arrow direction.



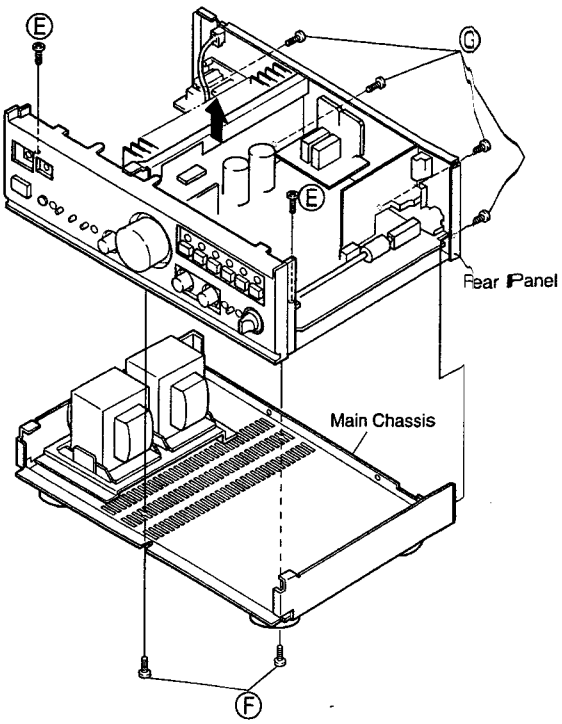
● Front Panel

1) Remove 3 screws (C) .
2) Remove 6 screws (D) .
3) Detach Front Panel in arrow direction.



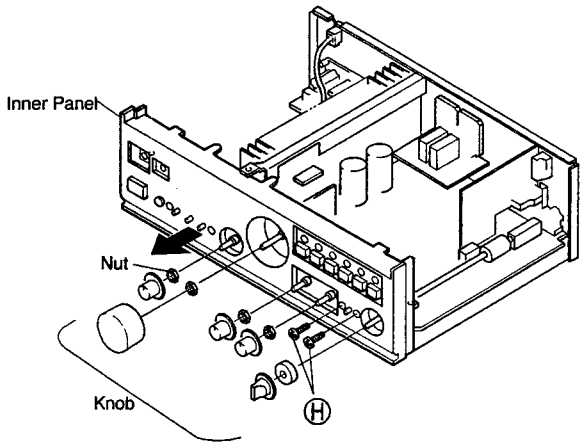
● Main Chassis

1) Remove 2 screws (E) .
2) Remove 2 screws (F) securing Power Radiator with Main Chassis.
3) Remove 4 screws (G) securing Rear Panel with Main Chassis.



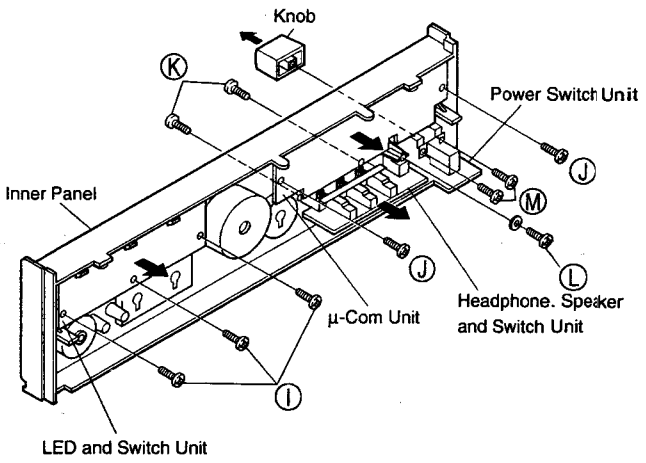
● Inner Panel

1) Remove 5 Knobs and 4 nuts.
2) Remove 2 screws (H) and detach Inner Panel in arrow direction.



● Each Unit of Inner Panel

1) Remove 3 screws (I), and detach LED and Switch Unit.
2) Remove 2 screws (J), and detach μ-Com Unit.
3) Remove 2 screws (K) securing Headphone, SP Switch Unit with Inner Panel.
4) Remove 1 screw (L) and 1 washer, and detach Headphone, SP. switch Unit.
5) Remove 2 screws (M) and a Knob, then detach Power Switch Unit.



FUNCTION OF NEW CIRCUIT

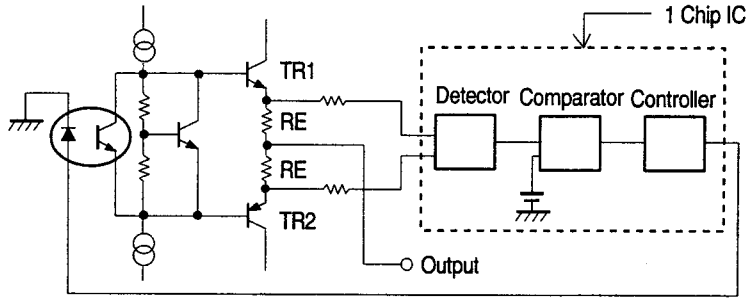
1. CHARACTERISTIC OF THIS CIRCUIT

The junction temperature of power amplifier output transistor always varies by an ambient temperature and music signal. Occurrence of junction temperature varying causes in change of bias current, unstable function, thus pure music signal playback is unable to do.

To maintain fixed bias current and to make pure music signal playback possible is the purpose of this circuit. This circuit holds stable bias current condition within a few seconds after turning on the power.

2. BLOCK DIAGRAM OF BIAS CONTROL CIRCUIT FUNCTION

As explained in Fig. 1, detects a voltage across the emitter resistors (RE) of TR1, TR2. Converts the detected voltage and comparing with the reference voltage to make the bias current value in stable state. Actually, these functions are performed by 1 chip IC.



TR1, TR2: Output transistor
RE : Emitter resistor

Fig. 1

3. POWER SUPPLY FOR ACTUATING CONTROL CIRCUIT

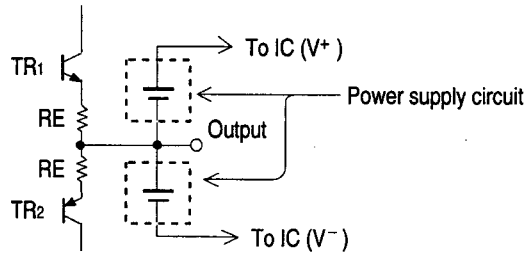


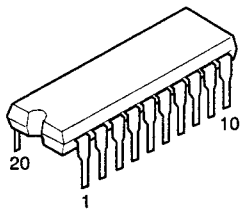
Fig. 2

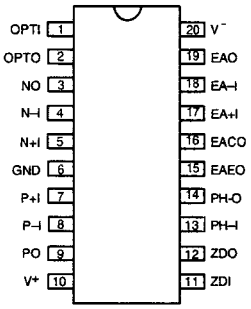
The circuit (IC) controlling bias current actuates by floating.

Accordingly, the power supply is also needed to be floated.

In this circuit, as indicated in Fig. 2, output is common to provide +, – power system and supplies to IC.

4. IC DESCRIPTION (μPC5023CS-064)

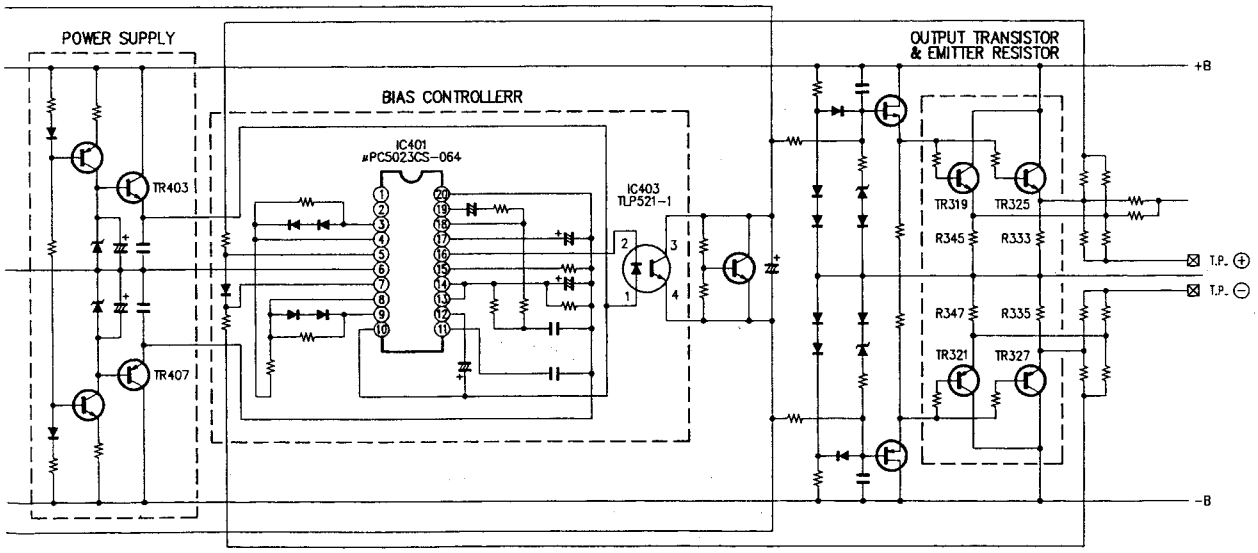




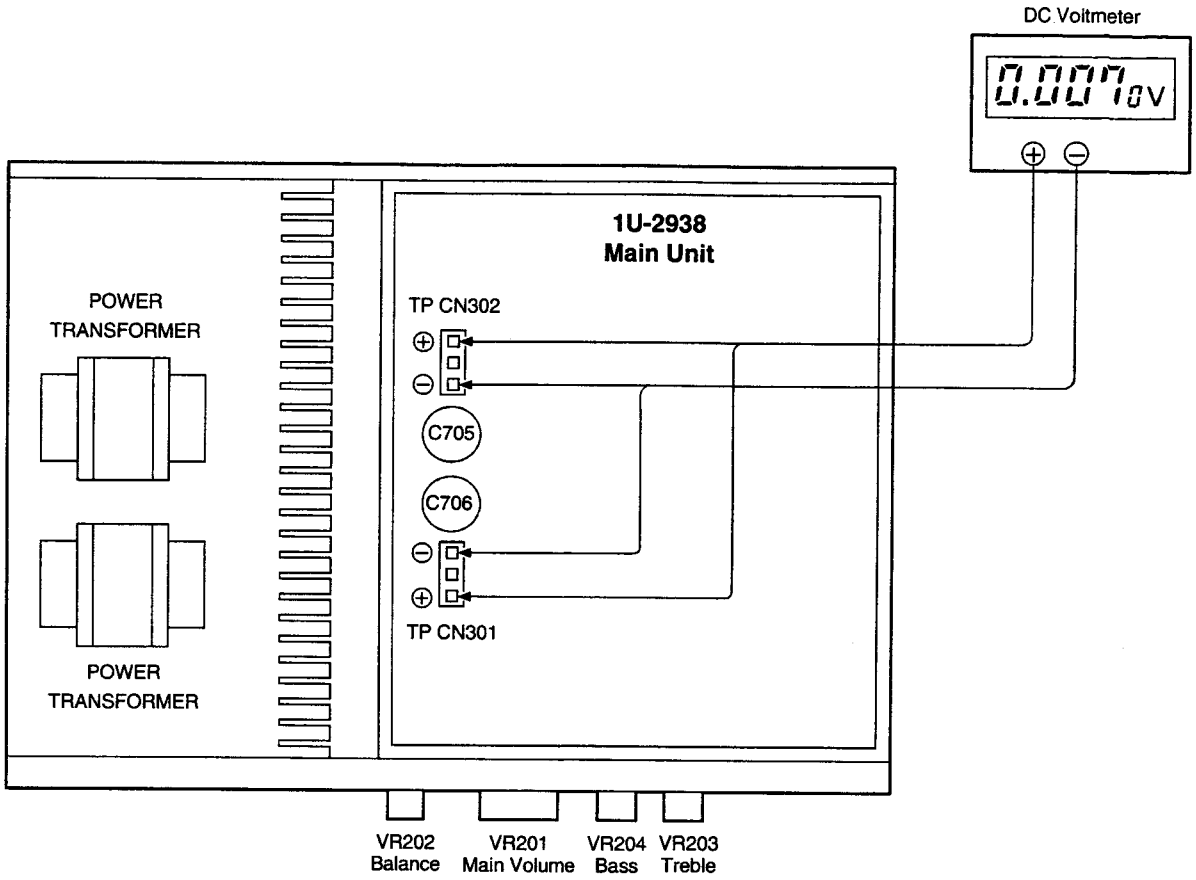
Pin. No.	Name	Contents
1	OPTI	NCP
2	OPTO	
3	NO	Comparator output
4	N–I	Comparator input (–)
5	N+I	Comparator input (+)
6	GND	Floating common
7	P+I	Comparator input (+)
8	P–I	Comparator input (–)
9	PO	Comparator output
10	V+	+ Power supply

Pin. No.	Name	Contents
11	ZDI	Control signal stabilizer input
12	ZDO	Control signal stabilizer output
13	PH-I	Peak hold input
14	PHO	Peak hold output
15	EAEO	Controller gain setting
16	EACO	Control signal output
17	EA+I	Reference voltage
18	EA–1	Comparator gain setting
19	EAO	Comparator output
20	V–	– Power supply

5. CIRCUIT IN THE CONCRETE



METHOD OF ADJUSTMENTS

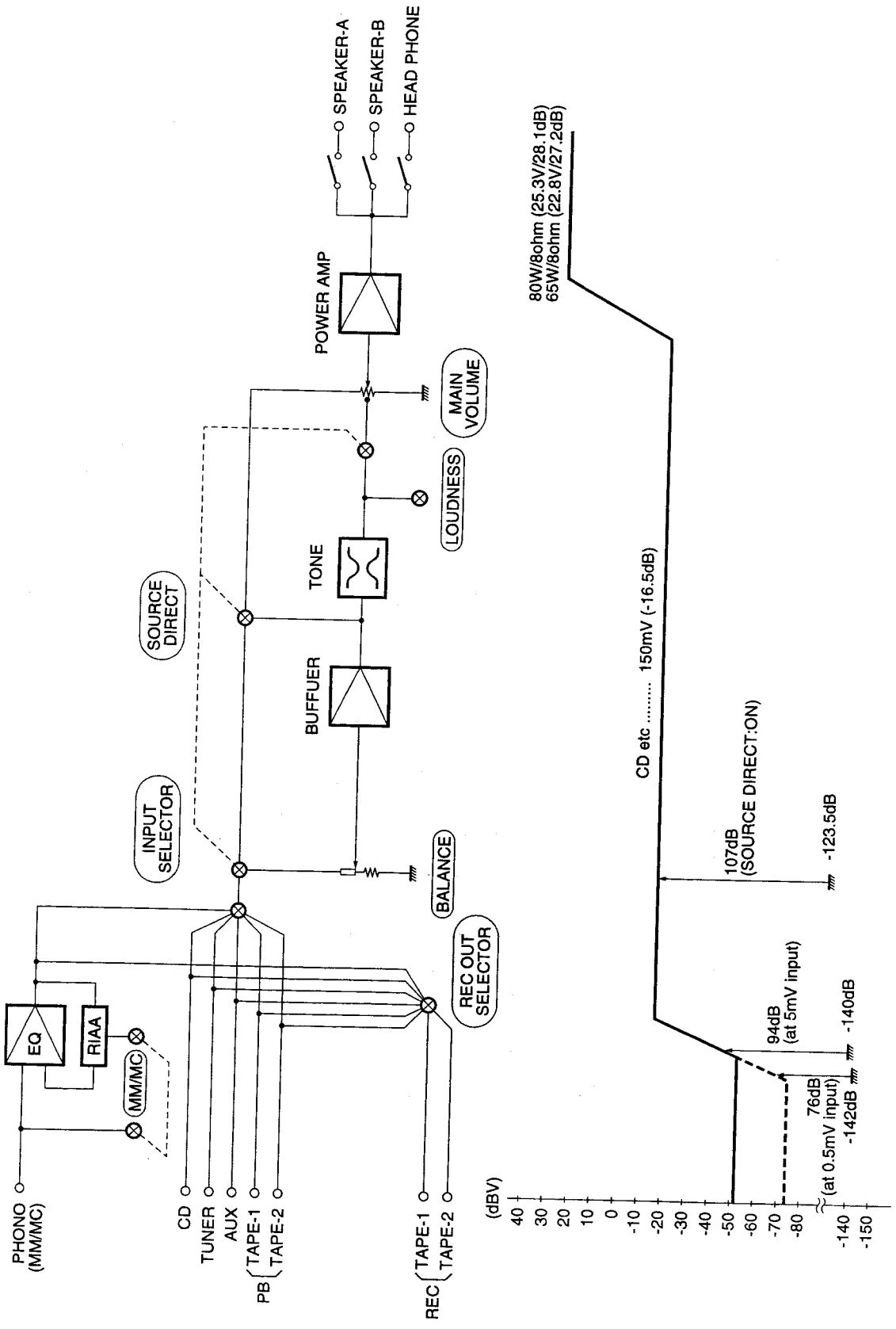


IDLING CURRENT

- Setup
  1. Lay the unit at an ordinary position away from a direct current from a cooler or fan. Do the adjustment at a temperature between 15°C (59°F) and 30°C (86°F).
  2. Set controls as follows.
     POWER SWITCH→ OFF (■)
     VOLUME CONTROL→ fully counterclockwise. (↺) min. (Main Volume VR201)
     (VR202, 203 and 204 are center position.)
     SPEAKER Terminals→ open: do not connect the speakers, dummy load etc.

- Confim
  1. Remove Top cover. And then connect DC Voltmeter to Test points of Main Unit.
  2. Connect Power cord to AC Outlet, and tum POWER Switch "on" (▬) .
  3. 10 seconds after check to see DC Voltmeter reading is 7 ± 2mV.
  4. 2 minutes after re-check DC Voltmeter for 7 ± 2mV reading.

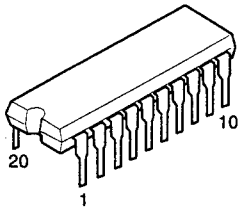
BLOCK AND LEVEL DIAGRAM

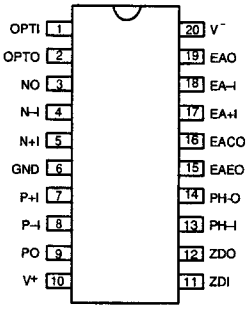


SEMICONDUCTORS

● IC's

μPC5023CS-064 (IC401,402)

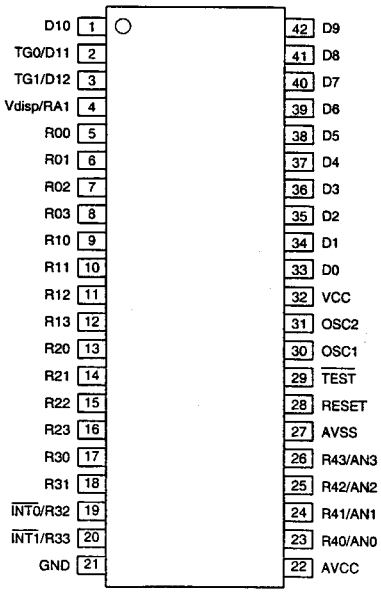




Pin. No.	Name	Contents
1	OPTI	NCP
2	OPTO	
3	NO	Comparator output
4	N–I	Comparator input (–)
5	N+I	Comparator input (+)
6	GND	Floating common
7	P+I	Comparator input (+)
8	P–I	Comparator input (–)
9	PO	Comparator output
10	V+	+ Power supply

Pin. No.	Name	Contents
11	ZDI	Control signal stabiliser input
12	ZDO	Control signal stabiliser output
13	PH–I	Peak hold input
14	PHO	Peak hold output
15	EAEO	Controller gain setting
16	EACO	Control signal output
17	EA+I	Reference voltage
18	EA–1	Comparator gain setting
19	EAO	Comparator output
20	V–	– Power supply

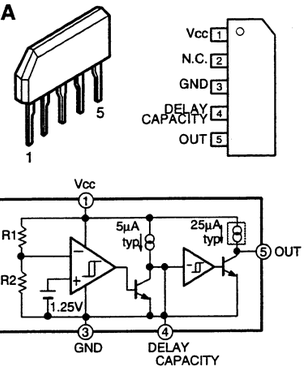
HD404304A13P (IC801)



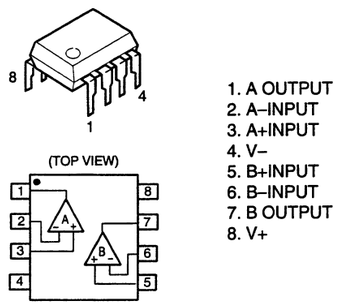
HD404304A13P Terminal Function

Pin No.	Name	I/O	Contents		Active
1	D10	O	MUTE/STANDBY LED Indication		H
2	TG0/D11	O	NOP		
3	TG1/D12	O	Power Control (REMOTE Power-ON/OFF)		L
4	Vdisp/RA1	I	NOP		
5	R00	O	NOP		
6	R01	O	Muting Control (Power ON-OFF, Function Shifting, MUTING)		L
7	R02	O	SP-A Control		H
8	R03	O	SP-B Control		H
9	R10	O	Key scan strobe		H
10	R11	O			H
11	R12	O			H
12	R13	O	NOP		
13	R20	I	Key scan receive		
14	R21	I			
15	R22	I			
16	R23	I			
17	R30	O	Volume Control "UP" → "H"		H
18	R31	O	Volume Control "DOWN" → "H"		H
19	INT0/R32	I	Power Breakdown detect input		
20	INT1/R33	I	Remote control signal decoding input		
21	GND		GND		
22	AVcc		Avcc (Vcc)		
23	R40/AN0		NOP		
24	R41/AN1	I	NOP		
25	R42/AN2	I	NOP		
26	R43/AN3	I	Discrimination port by user's genre		
27	AVss		AVss (GND)		
28	RESET		M51954A; External		
29	TEST		Vcc		
30	OSC1		Ceiler Fil Oscillator 4MHz; External		
31	OSC2		Ceiler Fil Oscillator 4MHz; External		
32	Vcc		Vcc		
33	D0	O	NOP		
34	D1	O	NOP		
35	D2	O	TAPE-2 Control	Mutually reset;	H
36	D3	O	TAPE-1 Control		H
37	D4	O	NOP		
38	D5	O	AUX Control		H
39	D6	O	TUNER Control		H
40	D7	O	NOP		
41	D8	O	CD Control		H
42	D9	O	PHONO Control		H

M51954A (IC803)

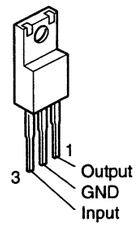


BA4558 (IC201, 901)
NJM2068DDC (IC202)

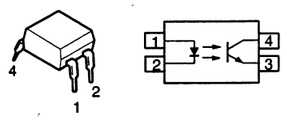


1. A OUTPUT
2. A–INPUT
3. A+INPUT
4. V–
5. B+INPUT
6. B–INPUT
7. B OUTPUT
8. V+

NJM7806FA(S) (IC702)

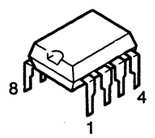


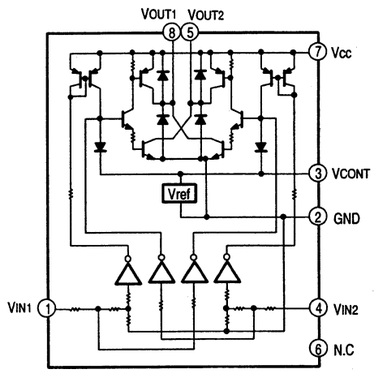
TLP521-1(BL)
INFRARED LED + PHOTO TRANSISTOR
(IC403, 404)



1: Anode
2: Cathode
3: Emitter
4: Collector

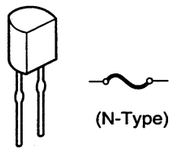
LB1639 (IC802)





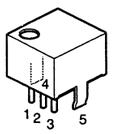
● IC PROTECTOR

ICP-15 (IC701)

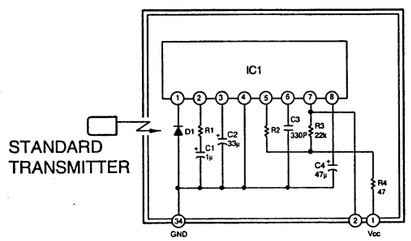


(N-Type)

SBX1610-52 (Remote Control Receiver) (IC105)



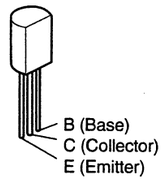
1. Vcc
2. Output
3. GND
4. Case Fin
5. Case Fin



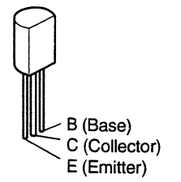
IC1 : CX20106A Chip
D1 : PIN Photo Diode Chip
C1,C2,C4 : Aluminum Electrolytic Capacitor
C3 : SL Characteristic ±5%
R1 : Gain Adjuster
R2 : fo Adjuster ±1% USE
R3,4 : ±5%

● TRANSISTORS

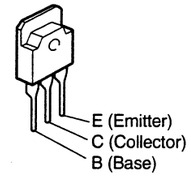
2SA970 (BL), (BL/GR)
2SA988 (E/F)
2SC1841 (E/F)
2SC1815 (BL)
2SC2240 (BL/GR)



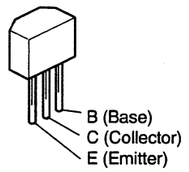
2SA1145 (O)/(Y)
2SC2705 (O)/(Y)



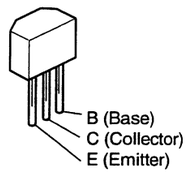
2SA1491 (O/P/Y)/(Z) PMA-925R
2SC3855 (O/P/Y)/(Z) PMA-925R
2SB1560 (O/P/Y) PMA-725R
2SD2390 (O/P/Y) PMA-725R

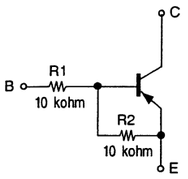


2SA1038S (S/E)
2SA933S (S)
2SC2389S (S/E)
2SSC1740S (S)

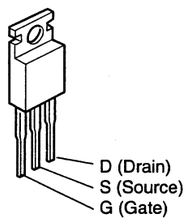


DTA114ES

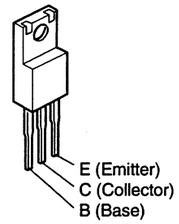




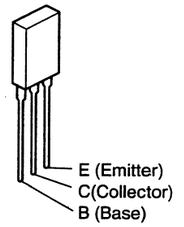
2SJ78
2SK215



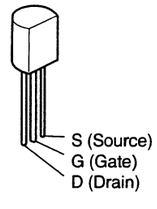
2SD2395 (E/F)
2SB1566 (E/F)



2SB1328 (P)

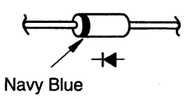


2SK369 (BL)/(GR)-C

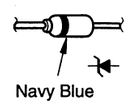


● DIODES (including LED)

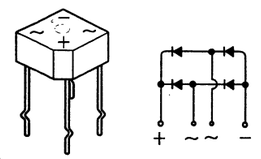
1SS252



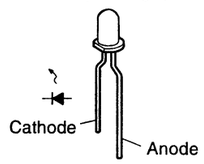
MTZJ 3.9A MTZJ 36A
MTZJ 7.5A MTZJ 16A
MTZJ 18A



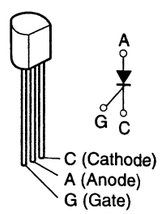
S4VB20F (D702) PMA-725R
4D4B42 (D702) PMA-925R



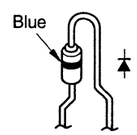
SLR56-VR (Red)
SLR56-DU (Orange)



Thyristor
SF0R1A42 (SC601)

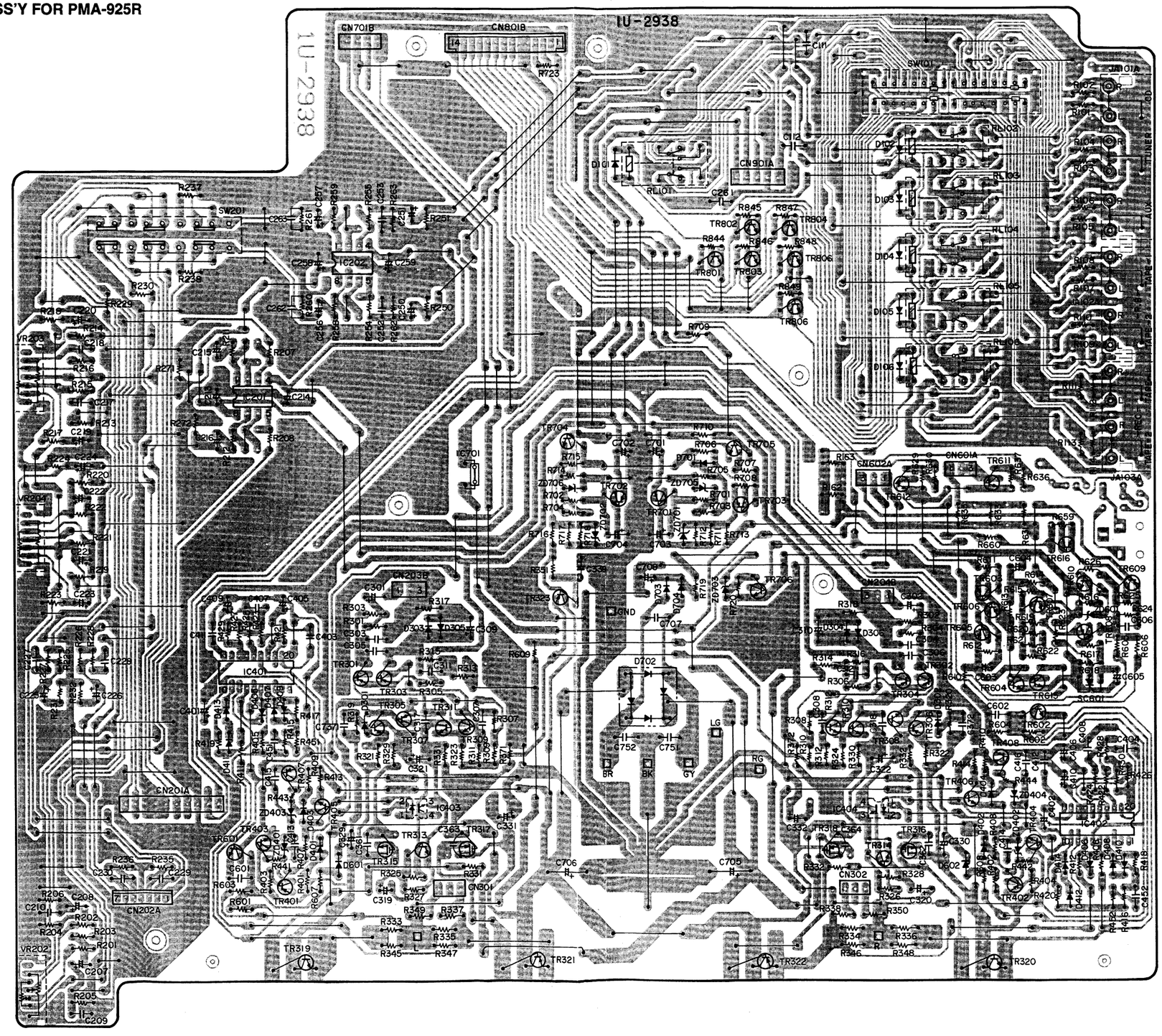


1SR35-200A



PRINTED WIRING BOARD (Pattern Side)

1U-2938C MAIN UNIT ASS'Y FOR PMA-925R


1U-2938
CN701B
CN801B
CN901A
CN201A
CN202A
CN203B
CN301
CN302
CN601A
CN602A
SW101
JA101A
JA103A
IC201
IC202
IC401
IC403
IC404
IC601
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TR801
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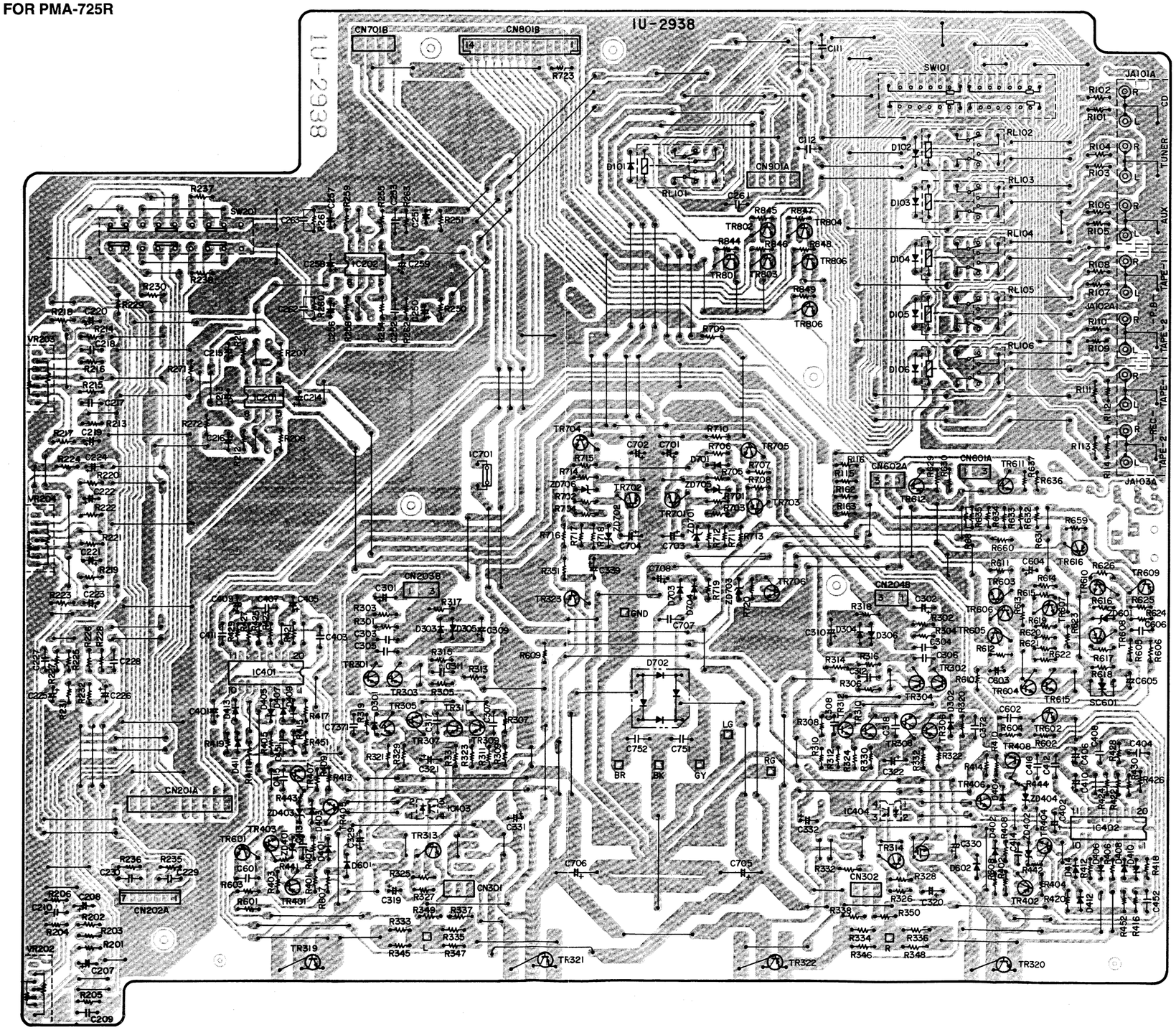
1U-2938 MAIN UNIT ASS'Y FOR PMA-725R
1U-2938A EUROPE Model
1U-2938B U.K. Model



A
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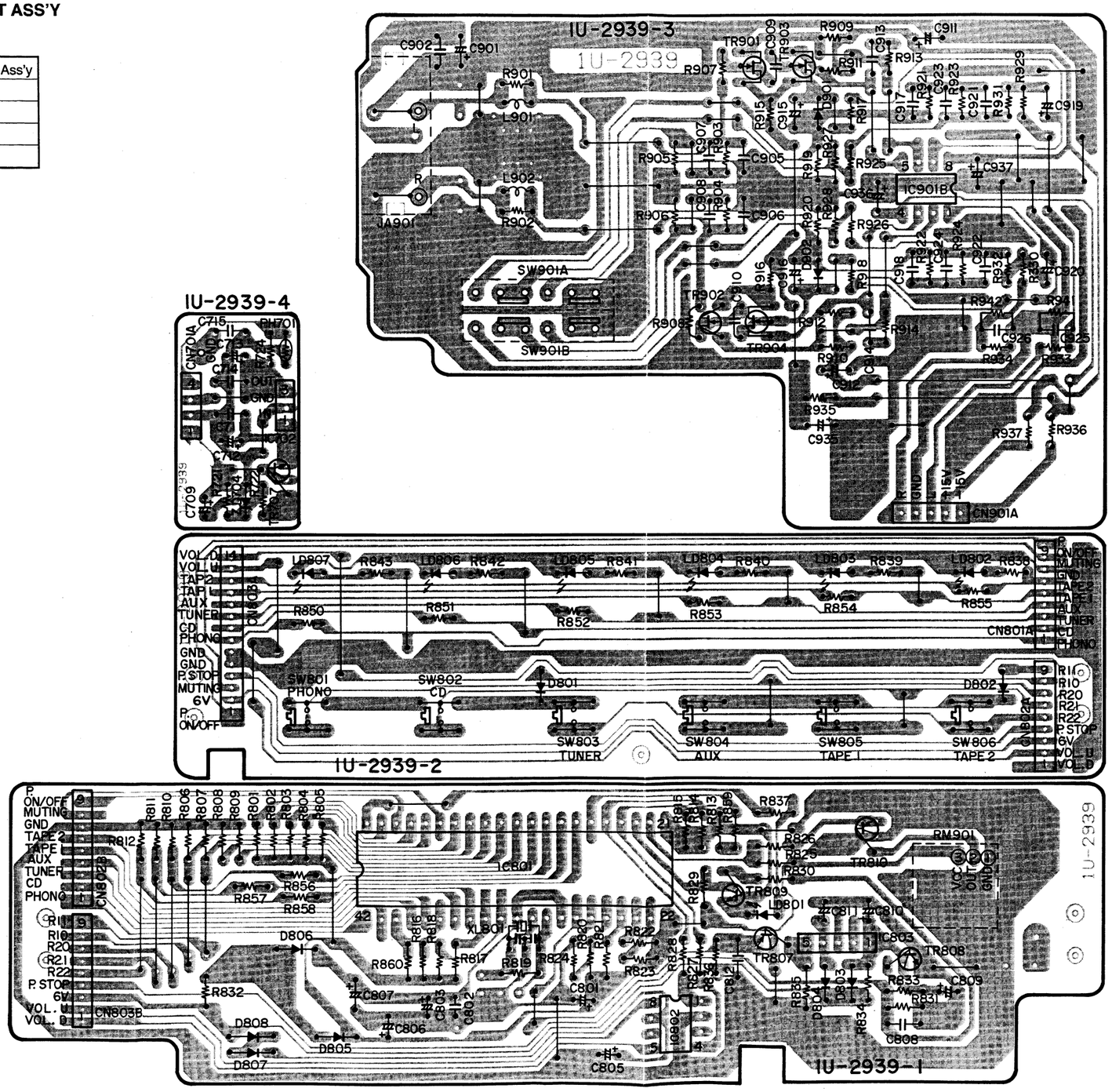
E

1U-2939A μ-COM. UNIT ASS'Y

1U-2939A μ-Com. Unit Ass'y	
-1	μ-Com. Unit
-2	LED Unit
-3	Phono Unit
-4	Supply Unit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JA901
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R902
SW901A
SW901B
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TR903
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IC901B
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D902
R918
R942
R940
C926
R934
R933
C925
TR902
C910
R908
R912
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R935
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R936
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CN702A
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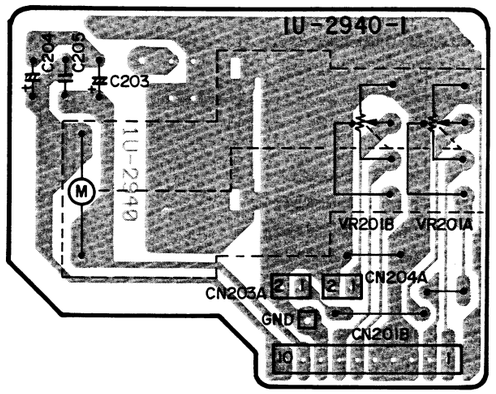
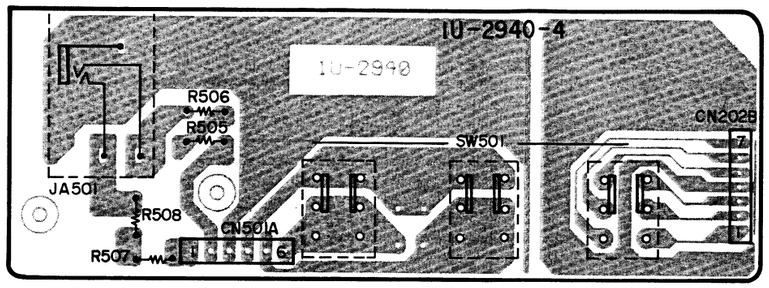
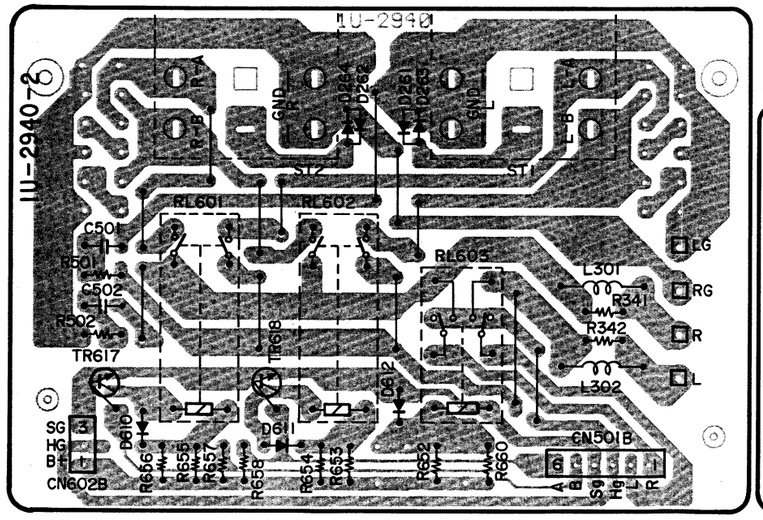
C840

1U-2940 VOLUME UNIT ASS'Y
1U-2940A : PMA-725R EUROPE Model
1U-2940B : PMA-725R U.K. Model
1U-2940C : PMA-925R

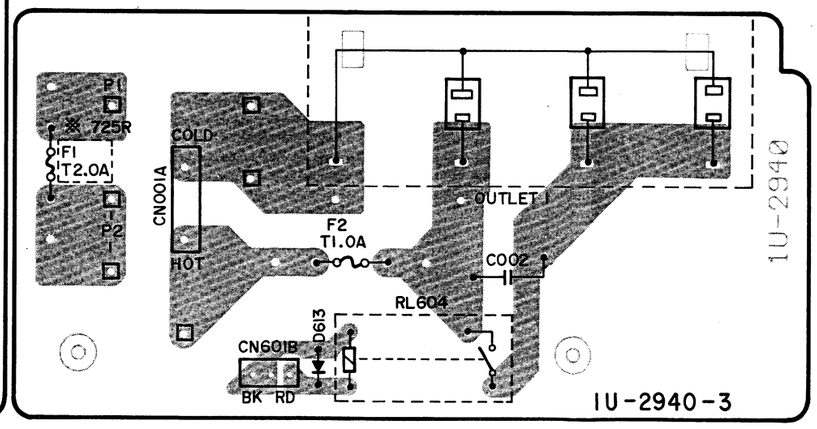
1U-2940 Volume Unit Ass'y	
-1	Volume Unit
-2	Speaker Unit
-3	AC Outlet Unit
-4	Speaker Sel. Unit







※ PMA-925R : FI T2.5A



NOTE FOR PARTS LIST

- Part indicated with the mark " ◉ " are not always in stock and possibly to take a long period of time for supplying, or in some case supplying of part may be refused.
- When ordering of part, clearly indicate "1" and "I" (i) to avoid mis-supplying.
- Ordering part without stating its part number can not be supplied.
- Part indicated with the mark "★" is not illustrated in the exploded view.
- Not including Carbon Film ±5%, 1/4W Type in the P.W.Board parts list. (Refer to the Schematic Diagram for those parts.)

WARNING:
Parts marked with this symbol ⚠ ▒▒ have critical characteristics.
Use ONLY replacement parts recommended by the manufacturer.

● Resistors

Ex.: RN (Type) 14K (Shape and performance) 2E (Power) 182 (Resistance) G (Allowable error) FR (Others)

RD : Carbon RC : Composition RS : Metal oxide film RW : Winding RN : Metal film RK : Metal mixture	2B : 1/8W 2E : 1/4W 2H : 1/2W 3A : 1W 3D : 2W 3F : 3W 3H : 5W	F : ±1% G : ±2% J : ±5% K : ±10% M : ±20%	P : Pulse-resistant type NL : Low noise type NB : Non-burning type FR : Fuse-resistor F : Lead wire forming

• Resistance

1 8 2 ⇒ 1800 ohm = 1.8 kohm
Indicates number of zeros after effective number.
2-digit effective number.
• Units: ohm

1 R 2 ⇒ 1.2 ohm
1-digit effective number.
2-digit effective number, decimal point indicated by R.
• Units: ohm

● Capacitors

Ex.: CE (Type) 04W (Shape and performance) 1H (Dielectric strength) 2R2 (Capacity) M (Allowable error) BP (Others)

CE : Aluminum foil electrolytic CA : Aluminum solid electrolytic CS : Tantalum electrolytic CQ : Film CK : Ceramic CC : Ceramic CP : Oil CM : Mica CF : Metallized CH : Metallized	0J : 6.3V 1A : 10V 1C : 16V 1E : 25V 1V : 35V 1H : 50V 2A : 100V 2B : 125V 2C : 160V 2D : 200V 2E : 250V 2H : 500V 2J : 630V	F : ±1% G : ±2% J : ±5% K : ±10% M : ±20% Z : +80% −20% P : +100% −0% C : ±0.25pF D : ±0.5pF = : Others	HS : High stability type BP : Non-polar type HR : Ripple-resistant type DL : For charge and discharge HF : For assuring high frequency U : UL part C : CSA part W : UL-CSA type F : Lead wire forming

• Capacity (electrolyte only)

2 2 2 ⇒ 2200μF
Indicates number of zeros after effective number.
2-digit effective number.
• Units: μF.

2 R 2 ⇒ 2.2μF
1-digit effective number.
2-digit effective number, decimal point indicated by R.
• Units: μF.

• Capacity (except electrolyte)

2 2 2 ⇒ 2200pF = 0.0022μF
(More than 2) — Indicates number of zeros after effective number.
2-digit effective number.
• Units: μF.

2 2 1 ⇒ 220pF
(0 or 1) — Indicates number of zeros after effective number.
2-digit effective number.
• Units: pF.

• When the dielectric strength is indicated in AC, "AC" is included after the dieelectric strength value.

PARTS LIST OF P.W.B. UNIT ASS'Y

1U-2938C MAIN UNIT ASS'Y (PMA-925R)

Ref. No.	Part No.	Part Name	Remarks
SEMICONDUCTORS GROUP			
IC201	263 0322 004	IC BA4558	Linear ope. amp
IC202	263 0609 002	IC NJM2068DDC	
IC401,402	263 0930 001	IC μPC5023CS-064	Bias IC
IC403,404	262 0874 009	IC TLP521-1(BL)	
IC701	268 0073 905	IC ICP-N15	IC protector
TR301~304	271 0094 919	Transistor 2SA970(BL)	
TR305,306	271 0131 924	Transistor 2SA988(E/F)	
TR307~312	273 0235 923	Transistor 2SC1841(E/F)	
TR313,314	273 0303 910	Transistor 2SC1740S(S)	
TR315,316	275 0069 001	Transistor 2SK215	N type FET
TR317,318	275 0068 002	Transistor 2SJ78	P type FET
TR323	271 0131 924	Transistor 2SA988(E/F)	
TR401,402	271 0280 901	Transistor 2SA1038S(S/E)	
TR403,404	273 0281 906	Transistor 2SC2705(O)/(Y)	
TR405,406	273 0432 904	Transistor 2SC2389S(S/E)	
TR407,408	271 0168 900	Transistor 2SA1145(O)/(Y)	
TR601,602	273 0235 923	Transistor 2SC1841(E/F)	
TR603~605	273 0303 910	Transistor 2SC1740S(S)	
TR606	271 0192 905	Transistor 2SA933S(S)	
TR607	273 0235 923	Transistor 2SC1841(E/F)	
TR608	271 0094 935	Transistor 2SA970(BL/GR)	
TR609	272 0107 906	Transistor 2SB1328(P)	
TR610~612	273 0235 923	Transistor 2SC1841(E/F)	
TR615	273 0303 910	Transistor 2SC1740S(S)	
TR616	272 0107 906	Transistor 2SB1328(P)	
TR701	274 0168 006	Transistor 2SD2395(E/F)	
TR702	272 0129 007	Transistor 2SB1566(E/F)	
TR703	271 0280 901	Transistor 2SA1038S(S/E)	
TR704,705	273 0432 904	Transistor 2SC2389S(S/E)	
TR706	273 0303 910	Transistor 2SC1740S(S)	
TR801~806	273 0235 923	Transistor 2SC1841(E/F)	
D101~106	276 0616 907	Diode 1SS252	
D301~306	276 0616 907	Diode 1SS252	
D351,352	276 0616 907	Diode 1SS252	
D401~414	276 0616 907	Diode 1SS252	
D601,602	276 0616 907	Diode 1SS252	
D701	276 0553 905	Diode 1SR35-200A	
⚠D702	276 0424 005	Diode 4D4B42(LC1)	Bridge
D703,704	276 0553 905	Diode 1SR35-200A	
ZD401~404	276 0643 954	Zener diode MTZJ3.9A	3.9 V
ZD601	276 0644 911	Zener diode MTZJ7.5A	7.5 V
ZD701,702	276 0645 978	Zener diode MTZJ36A	36 V
ZD703	276 0644 911	Zener diode MTZJ7.5A	7.5 V
ZD705,706	276 0645 907	Zener diode MTZJ18A	18 V
SC601	279 0016 904	Thyristor SF0R1A42	
RESISTORS GROUP			
VR202	211 0798 103	Variable resistor 100kohm	Balance
VR203	211 0834 012	Variable resistor 10kohm	Treble
VR204	211 0834 009	Variable resistor 30kohm	Bass
⚠R116	244 0157 003	Metal oxide 2.2kohm 3W	RS14B3F222JNBS(S)
⚠R162	244 0157 003	Metal oxide 2.2kohm 3W	RS14B3F222JNBS(S)
⚠R309~312	241 2380 963	Carbon film 2.2kohm 1/4W	RD14B2E222JNBS
⚠R317,318	241 2377 963	Carbon film 120ohm 1/4W	RD14B2E121JNBS
⚠R319~322	241 2377 976	Carbon film 130ohm 1/4W	RD14B2E131JNBS
⚠R323,324	241 2315 967	Fusible resistor 68ohm 1/4W	RD14B2E680GFRS
⚠R325,326	241 2380 950	Carbon film 2kohm 1/4W	RD14B2E202JNBS
⚠R327,328	241 2379 929	Carbon film 560ohm 1/4W	RD14B2E561JNBS
⚠R331,332	241 2378 920	Carbon film 220ohm 1/4W	RD14B2E221JNBS
⚠R333~336	244 2043 982	Metal oxide 0.22ohm 1W	RS14B3AR22JNBS(S)
⚠R345~348	244 2043 982	Metal oxide 0.22ohm 1W	RS14B3AR22JNBS(S)
⚠R351	241 2379 987	Carbon film 1kohm 1/4W	RD14B2E102JNBS
⚠R401,402	241 2379 916	Carbon film 510ohm 1/4W	RD14B2E511JNBS
⚠R403,404	241 2378 946	Carbon film 270ohm 1/4W	RD14B2E271JNBS
⚠R409,410	241 2379 916	Carbon film 510ohm 1/4W	RD14B2E511JNBS
⚠R413,414	241 2378 946	Carbon film 270ohm 1/4W	RD14B2E271JNBS
⚠R441~444	241 2379 987	Carbon film 1kohm 1/4W	RD14B2E102JNBS
⚠R601~604	241 2380 950	Carbon film 2kohm 1/4W	RD14B2E202JNBS
⚠R631	244 2069 018	Metal oxide 3kohm 5W	RS14B3H302JNBS(S)
⚠R633	244 2069 018	Metal oxide 3kohm 5W	RS14B3H302JNBS(S)
⚠R635	244 2069 018	Metal oxide 3kohm 5W	RS14B3H302JNBS(S)
⚠R711,712	244 2043 908	Metal oxide 680ohm 1W	RS14B3A681JNBS(S)
⚠R713	241 2387 940	Carbon film 4.7ohm 1/4W	RD14B2E4R7JNBS
⚠R716	241 2387 940	Carbon film 4.7ohm 1/4W	RD14B2E4R7JNBS
⚠R717,718	244 2043 908	Metal oxide 680ohm 1W	RS14B3A681JNBS(S)

Ref. No.	Part No.	Part Name	Remarks
CAPACITORS GROUP			
C111,112	253 4444 907	Ceramic cap. 220pF/50V	CC45SL1H221J
C207,208	254 4260 980	Electrolytic 10μF/50V	CE04W1H100M
C209,210	253 4537 982	Ceramic cap. 56pF/50V	CC45SL1H560J
C213,214	254 4260 948	Electrolytic 1μF/50V	CE04W1H010M
C215,216	254 4254 941	Electrolytic 100μF/16V	CE04W1C101M
C217,218	255 1265 994	Film cap. 0.033μF/50V	CQ93M1H333J(B)
C219,220	254 4260 919	Electrolytic 0.22μF/50V	CE04W1HR22M
C221,222	254 4260 906	Electrolytic 0.1μF/50V	CE04W1H0R1M
C223,224	254 4260 935	Electrolytic 0.47μF/50V	CE04W1HR47M
C225,226	254 4260 922	Electrolytic 0.33μF/50V	CE04W1HR33M
C227,228	256 1034 953	Metalized 0.068μF/50V	CF93A1H683J
C229,230	255 1265 994	Film cap. 0.033μF/50V	CQ93M1H333J(B)
C250,251	254 4254 941	Electrolytic 100μF/16V	CE04W1C101M
C252,253	255 4237 929	Film cap. 56pF/100V	CQ93P2A560J(NH)
C256,257	254 4254 941	Electrolytic 100μF/16V	CE04W1C101M
C258,259	254 4260 948	Electrolytic 1μF/50V	CE04W1H010M
C261	253 1181 917	Ceramic cap. 0.022μF/50V	CK45F1H223Z
C262,263	255 1265 936	Film cap. 0.01μF/50V	CQ93M1H103J(B)
C301,302	254 4254 941	Electrolytic 100μF/16V	CE04W1C101M
C303,304	255 4235 918	Film cap. 100pF/100V	CQ93P2A101J(NH)
C305,306	255 6177 980	Film cap. 220pF/50V	CQ09S1H221J(STM)
C307,308	255 1264 908	Film cap. 1000pF/50V	CQ93M1H102J(B)
C309,310	254 4252 082	Electrolytic 2200μF/10V	CE04W1A222M
C311,312	255 4237 929	Film cap. 56pF/100V	CQ93P2A560J(NH)
C317,318	253 4470 900	Ceramic cap. 10pF/500V	CC45SL2H100D
C319~322	254 4261 921	Electrolytic 100μF/50V	CE04W1H101M
C329~332	254 4262 904	Electrolytic 4.7μF/63V	CE04W1J4R7M
C339	254 4262 755	Electrolytic 100μF/63V	CE04W1J101MC
C361,362	253 4490 906	Ceramic cap. 68pF/500V	CC45SL2H680J
C363,364	253 4470 900	Ceramic cap. 10pF/500V	CC45SL2H100D
C371,372	255 6178 947	Film cap. 680pF/50V	CQ09S1H681J(STM)
C401,402	254 4261 918	Electrolytic 47μF/50V	CE04W1H470M
C403,404	254 3056 959	Electrolytic 10μF/50V	CE04D1H100MBP (Bipole)
C405,406	254 4260 993	Electrolytic 22μF/50V	CE04W1H220M
C407,408	255 1264 908	Film cap. 1000pF/50V	CQ93M1H102J(B)
C409,410	254 4260 948	Electrolytic 1μF/50V	CE04W1H010M
C411,412	255 1265 936	Film cap. 0.01μF/50V	CQ93M1H103J(B)
C413~416	256 1034 979	Metalized 0.1μF/50V	CF93A1H104J
C451,452	253 1179 987	Ceramic cap. 470pF/50V	CK45B1H471K
C601,602	255 1265 936	Film cap. 0.01μF/50V	CQ93M1H103J(B)
C603	254 4250 945	Electrolytic 330μF/6.3V	CE04W0J331M
C604	254 4252 930	Electrolytic 100μF/10V	CE04W1A101M
C605	254 4252 901	Electrolytic 22μF/10V	CE04W1A220M
C606	255 1265 978	Film cap. 0.022μF/50V	CQ93M1H223J(B)
C701,702	254 4260 948	Electrolytic 1μF/50V	CE04W1H010M
C703,704	254 4261 921	Electrolytic 100μF/50V	CE04W1H101M
C705,706	254 6206 007	Electrolytic 12000μF/63V	CE68W1J123MC(DL)
C707	256 1042 903	Metalized 0.1μF/250V	CF93A2E104K
C708	254 4263 916	Electrolytic 0.22μF/100V	CE04W2AR22M

Ref. No.	Part No.	Part Name	Remarks	Q'ty
OTHERS PARTS GROUP				
	—	(P.W.board)		(1)
SW101	212 0336 005	Rotary switch	Rec out sel.	1
SW202	212 1161 004	1P push switch	Surce direct	1
RL101~106	214 0178 007	Relay(MR62-12USRY)		6
	204 8266 008	4P pin jack(S-GND)	for TAPE	2
	204 8278 009	6P pin jack(S-GND)	for INPUTS	1

1U-2939A μ-COM UNIT ASS'Y (PMA-925R)

Ref. No.	Part No.	Part Name	Remarks
SEMICONDUCTORS GROUP			
IC105	499 0150 008	IC SBX1610-52	Remote sensor
IC702	263 0793 002	IC NJM7806FA(S)	Regulator +6 V
IC801	262 1579 303	IC HD404304A13P	μ-com
IC802	263 0476 002	IC LB1639	Motor driver
IC803	263 0535 008	IC M51954AL	Reset IC
IC901	263 0322 004	IC BA4558	
TR707	274 0168 006	Transistor 2SD2395(E/F)	
TR807	271 0192 905	Transistor 2SA933S(S)	
TR808,809	273 0303 910	Transistor 2SC1740S(S)	
TR810	269 0046 906	Transistor DTA114ES	Built in resistor
TR901~904	275 0038 045	Transistor 2SK369(BL)/(GR)-C	N type FET △VGS
D801~805	276 0616 907	Diode 1SS252	
D806	276 0553 905	Diode 1SR35-200A	
D807,808	276 0616 907	Diode 1SS252	
D901,902	276 0616 907	Diode 1SS252	
ZD704	276 0644 995	Zener diode MTZJ16A	16 V
LD801	393 9559 904	LED SLR-56DUTB7	Orange
LD802~807	393 9515 906	LED SLR-56VR70	Red
PH701	279 0034 041	Posistor PTH9M04BD222TS2F333	
RESISTORS GROUP			
⚠R832	241 2387 940	Carbon film 4.7ohm 1/4W	RD14B2E4R7JNBS
⚠R836,937	241 2377 905	Carbon film 68ohm 1/4W	RD14B2E680JNBS
CAPACITORS GROUP			
C709	254 4263 916	Electrolytic 0.22μF/100V	CE04W2AR22M
C711	253 1181 904	Ceramic cap. 0.01μF/50V	CK45F1H103Z
C712,713	254 4260 980	Electrolytic 10μF/50V	CE04W1H100M
C714,715	253 1181 904	Ceramic cap. 0.01μF/50V	CK45F1H103Z
C801	254 4213 937	Electrolytic 100μF/6.3V	CE04W0J101M(SRA)
C802	253 1181 917	Ceramic cap. 0.022μF/50V	CK45F1H223Z
C803	254 4213 937	Electrolytic 100μF/6.3V	CE04W0J101M(SRA)
C805	254 4213 937	Electrolytic 100μF/6.3V	CE04W0J101M(SRA)
C806	254 6190 906	Electrolytic 330μF/6.3V	CE04W0J331M(SRA)
C807	259 0007 003	Back up cap. 8200μF/5.5V	SB CAP==822=
C808	253 1181 917	Ceramic cap. 0.022μF/50V	CK45F1H223Z

Ref. No.	Part No.	Part Name	Remarks
C809	254 4196 973	Electrolytic 4.7μF/50V	CE04W1H4R7M(SRA)
C810	254 4196 944	Electrolytic 1μF/50V	CE04W1H010M(SRA)
C811	254 4196 928	Electrolytic 0.33μF/50V	CE04W1HR33M(SRA)
C812	256 1034 982	Metallized 0.12μF/50V	CF93A1H124J
C901	254 4260 948	Electrolytic 1μF/50V	CE04W1H010M
C902	253 1181 917	Ceramic cap. 0.022μF/50V	CK45F1H223Z
C905,906	253 1179 929	Ceramic cap. 150pF/50V	CK45B1H151K
C907,908	253 1179 961	Ceramic cap. 330pF/50V	CK45B1H331K
C909,910	253 1179 903	Ceramic cap. 100pF/50V	CK45B1H101K
C911,912	254 4260 948	Electrolytic 1μF/50V	CE04W1H010M
C913,914	255 1251 937	Film cap. 3300pF/50V	CQ92M1H332J(MRZ)
C915,916	254 4252 930	Electrolytic 100μF/10V	CE04W1A101M
C917,918	256 1034 953	Metallized 0.068μF/50V	CF93A1H683J
C919,920	254 4254 909	Electrolytic 10μF/16V	CE04W1C100M
C921,922	255 4223 959	Film cap. 0.018μF/50V	CQ92M1H183J(MRZ)
C923,924	255 1264 911	Film cap. 1200pF/50V	CQ93M1H122J(B)
C925,926	253 1179 961	Ceramic cap. 330pF/50V	CK45B1H331K
C935	254 4252 930	Electrolytic 100μF/10V	CE04W1A101M
C936,937	254 4256 936	Electrolytic 47μF/25V	CE04W1E470M

OTHERS PARTS GROUP				Q'ty
	—	(P.W.board)		(1)
L901,902	235 9003 002	Inductor (150μH)	FTZ choke coil	2
XL801	399 9018 003	Resonator	CST4.00 MGW	1
SW801~806	212 4789 001	Tact switch		6
SW901	212 1099 008	1P push swtch	MM/MC	1
	204 8413 000	2P pin jack(C-GND)	PHONO	1
	415 0309 013	P.V.C.tube L=10	for PH701	2

1U-2940C VOLUME UNIT ASS'Y (PMA-925R)

Ref. No.	Part No.	Part Name	Remarks
SEMICONDUCTORS GROUP			
TR617,618	273 0235 923	Transistor 2SC1841(E/F)	
D001	276 0616 907	Diode 1SS252	
D441~444	276 0616 907	Diode 1SS252	
D610~612	276 0616 907	Diode 1SS252	
RESISTORS GROUP(Not included carbon film ±5%, 1/4W)			
VR201	211 0869 003	Variable resistor 30kohm	Main volume
⚠R341,342	244 2043 982	Metal oxide 0.22ohm 1W	RS14B3AR22JNBS(S)
⚠R501,502	244 2043 937	Metal oxide 10ohm 1W	RS14B3A100JNBS(S)
⚠R505~508	244 2050 933	Metal oxide 180ohm 1W	RS14B3A181JNBS(S)
⚠R652	244 0157 003	Metal oxide 2.2kohm 3W	RS14B3F222JNB
⚠R653	244 2069 018	Metal oxide 3kohm 5W	RS14B3H302JNB(S)
⚠R654	244 2069 005	Metal oxide 2.4kohm 5W	RS14B3H242JNB(S)
⚠R655	244 2069 018	Metal oxide 3kohm 5W	RS14B3H302JNB(S)
⚠R656	244 2069 005	Metal oxide 2.4kohm 5W	RS14B3H242JNB(S)
⚠R660	244 0157 003	Metal oxide 2.2kohm 3W	RS14B3F222JNB
CAPACITORS GROUP			
⚠C002	253 8003 713	Ceramic cap. 4700pF/400V AC	CK45E2GAC472MC
C203,204	254 4254 909	Electrolytic 10μF/16V	CE04W1C100M
C205	255 1265 936	Film cap. 0.01μF/50V	CQ93M1H103J(B)
C501,502	256 1034 979	Metalized 0.1μF/50V	CF93A1H104J
OTHERS PARTS GROUP			**Q'ty**
	—	(P.W.board)	(1)
L301,302	235 0104 007	Inductor(1mH)	2
	202 0022 008	Fuse holder	for F001,002 4
⚠F001	206 1015 032	Fuse(2.5A)	1
⚠F002	206 1015 029	Fuse(1A T)	1
	513 0654 017	Fuse label (T. 25A)	for F001 1
⚠	415 0299 000	Capacitor cover	for C002 1
⚠RL001	214 0142 004	Relay(TV-5)	1
RL601,602	214 0129 001	Relay(DH2TU)	for SP-A,B 2
RL603	214 0178 007	Relay(MR62-12USRY)	for Headphone 1
SW501	212 1162 003	3P push switch	for Speaker ON-OFF 1
	205 0484 001	8P speaker terminal	for Speaker 1
	204 8503 004	:Head phone jack	JA501 1
⚠	203 3950 002	3P AC outlet	AOL-1 1
⚠	205 0692 000	2P wrapping terminal	1

1U-2938 MAIN UNIT ASS'Y (PMA-725R)
1U-2938A : Europe model
1U-2938B : U.K. model

Ref. No.	Part No.	Part Name	Remarks
SEMICONDUCTORS GROUP			
IC201	263 0322 004	IC BA4558	Linear ope. amp
IC202	263 0609 002	IC NJM2068DDC	
IC401,402	263 0930 001	IC μPC5023CS-064	Bias IC
IC403,404	262 0874 009	IC TLP521-1(BL)	
IC701	268 0073 905	IC ICP-N15	IC protector
TR301~304	271 0094 919	Transistor 2SA970(BL)	
TR305,306	271 0131 924	Transistor 2SA988(E/F)	
TR307~312	273 0235 923	Transistor 2SC1841(E/F)	
TR313,314	273 0303 910	Transistor 2SC1740S(S)	
TR323	271 0131 924	Transistor 2SA988(E/F)	
TR401,402	271 0280 901	Transistor 2SA1038S(S/E)	
TR403,404	273 0281 906	Transistor 2SC2705(O)/(Y)	
TR405,406	273 0432 904	Transistor 2SC2389S(S/E)	
TR407,408	271 0168 900	Transistor 2SA1145(O)/(Y)	
TR601,602	273 0235 923	Transistor 2SC1841(E/F)	
TR603~605	273 0303 910	Transistor 2SC1740S(S)	
TR606	271 0192 905	Transistor 2SA933S(S)	
TR607	273 0235 923	Transistor 2SC1841(E/F)	
TR608	271 0094 935	Transistor 2SA970(BL/GR)	
TR609	272 0107 906	Transistor 2SB1328(P)	
TR610	273 0235 923	Transistor 2SC1841(E/F)	
TR611	273 0235 923	Transistor 2SC1841(E/F)	Europe model only
R612	273 0235 923	Transistor 2SC1841(E/F)	
TR615	273 0303 910	Transistor 2SC1740S(S)	
TR616	272 0107 906	Transistor 2SB1328(P)	
TR701	274 0168 006	Transistor 2SD2395(E/F)	
TR702	272 0129 007	Transistor 2SB1566(E/F)	
TR703	271 0280 901	Transistor 2SA1038S(S/E)	
TR704,705	273 0432 904	Transistor 2SC2389S(S/E)	
TR706	273 0303 910	Transistor 2SC1740S(S)	
TR801~806	273 0235 923	Transistor 2SC1841(E/F)	
D101~106	276 0616 907	Diode 1SS252	
D301~306	276 0616 907	Diode 1SS252	
D351,352	276 0616 907	Diode 1SS252	
D401~414	276 0616 907	Diode 1SS252	
D601,602	276 0616 907	Diode 1SS252	
D701	276 0553 905	Diode 1SR35-200A	

Ref. No.	Part No.	Part Name	Remarks
⚠D702	276 0338 007	Diode S4VB20F	Bridge
D703,704	276 0553 905	Diode 1SR35-200A	
ZD401~404	276 0643 954	Zener diode MTZJ3.9A	3.9 V
ZD601	276 0644 911	Zener diode MTZJ7.5A	7.5 V
ZD701,702	276 0645 978	Zener diode MTZJ36A	36 V
ZD703	276 0644 911	Zener diode MTZJ7.5A	7.5 V
ZD705,706	276 0645 907	Zener diode MTZJ18A	18 V
SC601	279 0016 904	Thyristor SF0R1A42	
RESISTORS GROUP			
VR202	211 0798 103	Variable resistor 100kohm	Balance
VR203	211 0834 012	Variable resistor 10kohm	Treble
VR204	211 0834 009	Variable resistor 30kohm	Bass
⚠R115,116	244 2051 974	Metal oxide 1kohm 1W	RS14B3A102JNBS(S)
⚠R162,163	244 2051 974	Metal oxide 1kohm 1W	RS14B3A102JNBS(S)
⚠R309~312	241 2380 963	Carbon film 2.2kohm 1/4W	RD14B2E222JNBS
⚠R317,318	241 2377 963	Carbon film 120ohm 1/4W	RD14B2E121JNBS
⚠R319~322	241 2377 976	Carbon film 130ohm 1/4W	RD14B2E131JNBS
⚠R323,324	241 2315 967	Fusible resistor 68ohm 1/4W	RD14B2E680GFRS
⚠R325,326	241 2380 950	Carbon film 2kohm 1/4W	RD14B2E202JNBS
⚠R327,328	241 2379 929	Carbon film 560ohm 1/4W	RD14B2E561JNBS
⚠R333~336	244 2043 982	Metal oxide 0.22ohm 1W	RS14B3AR22JNBS(S)
⚠R345~348	244 2043 982	Metal oxide 0.22ohm 1W	RS14B3AR22JNBS(S)
⚠R351	241 2379 987	Carbon film 1kohm 1/4W	RD14B2E102JNBS
⚠R401,402	241 2379 916	Carbon film 510ohm 1/4W	RD14B2E511JNBS
⚠R403,404	241 2378 946	Carbon film 270ohm 1/4W	RD14B2E271JNBS
⚠R409,410	241 2379 916	Carbon film 510ohm 1/4W	RD14B2E511JNBS
⚠R413,414	241 2378 946	Carbon film 270ohm 1/4W	RD14B2E271JNBS
⚠R441~444	241 2379 987	Carbon film 1kohm 1/4W	RD14B2E102JNBS
⚠R601~604	241 2380 950	Carbon film 2kohm 1/4W	RD14B2E202JNBS
⚠R631~633	244 2051 990	Metal oxide 4.7kohm 1W	RS14B3A472JNBS(S)
⚠R634,635	244 2052 957	Metal oxide 5.6kohm 1W	RS14B3A562JNBS(S)
⚠R681	244 2052 957	Metal oxide 5.6kohm 1W	RS14B3A562JNBS(S)
⚠R711,712	244 2043 908	Metal oxide 680ohm 1W	RS14B3A681JNBS(S)
⚠R713	241 2387 940	Carbon film 4.7ohm 1/4W	RD14B2E4R7JNBS
⚠R716	241 2387 940	Carbon film 4.7ohm 1/4W	RD14B2E4R7JNBS
⚠R717,718	244 2043 908	Metal oxide 680ohm 1W	RS14B3A681JNBS(S)

Ref. No.	Part No.	Part Name	Remarks
CAPACITORS GROUP			
C111,112	253 4444 907	Ceramic cap. 220pF/50V	CC45SL1H221J
C207,208	254 4260 980	Electrolytic 10μF/50V	CE04W1H100M
C209,210	253 4537 982	Ceramic cap. 56pF/50V	CC45SL1H560J
C213,214	254 4260 948	Electrolytic 1μF/50V	CE04W1H010M
C215,216	254 4254 941	Electrolytic 100μF/16V	CE04W1C101M
C217,218	255 1265 994	Film cap. 0.033μF/50V	CQ93M1H333J(B)
C219,220	254 4260 919	Electrolytic 0.22μF/50V	CE04W1HR22M
C221,222	254 4260 906	Electrolytic 0.1μF/50V	CE04W1H0R1M
C223,224	254 4260 935	Electrolytic 0.47μF/50V	CE04W1HR47M
C225,226	254 4260 922	Electrolytic 0.33μF/50V	CE04W1HR33M
C227,228	256 1034 953	Metalized 0.068μF/50V	CF93A1H683J
C229,230	255 1265 994	Film cap. 0.033μF/50V	CQ93M1H333J(B)
C250,251	254 4254 941	Electrolytic 100μF/16V	CE04W1C101M
C252,253	255 4237 929	Film cap. 56pF/100V	CQ93P2A560J(NH)
C256,257	254 4254 941	Electrolytic 100μF/16V	CE04W1C101M
C258,259	254 4260 948	Electrolytic 1μF/50V	CE04W1H010M
C261	253 1181 917	Ceramic cap. 0.022μF/50V	CK45F1H223Z
C262,263	255 1265 936	Film cap. 0.01μF/50V	CQ93M1H103J(B)
C301,302	254 4254 941	Electrolytic 100μF/16V	CE04W1C101M
C303,304	255 4235 918	Film cap. 100pF/100V	CQ93P2A101J(NH)
C305,306	255 6177 980	Film cap. 220pF/50V	CQ09S1H221J(STM)
C307,308	255 1264 908	Film cap. 1000pF/50V	CQ93M1H102J(B)
C309,310	254 4252 082	Electrolytic 2200μF/10V	CE04W1A222M
C311,312	255 4237 929	Film cap. 56pF/100V	CQ93P2A560J(NH)
C317,318	253 4470 900	Ceramic cap. 10pF/500V	CC45SL2H100D
C319~322	254 4261 921	Electrolytic 100μF/50V	CE04W1H101M
C329~332	254 4262 904	Electrolytic 4.7μF/63V	CE04W1J4R7M
C339	254 4262 755	Electrolytic 100μF/63V	CE04W1J101MC
C371,372	255 6178 947	Film cap. 680pF/50V	CQ09S1H681J(STM)
C401,402	254 4261 918	Electrolytic 47μF/50V	CE04W1H470M
C403,404	254 3056 959	Electrolytic 10μF/50V	CE04D1H100MBP (Bipole)
C405,406	254 4260 993	Electrolytic 22μF/50V	CE04W1H220M
C407,408	255 1264 908	Film cap. 1000pF/50V	CQ93M1H102J(B)
C409,410	254 4260 948	Electrolytic 1μF/50V	CE04W1H010M
C411,412	255 1265 936	Film cap. 0.01μF/50V	CQ93M1H103J(B)
C413~416	256 1034 979	Metalized 0.1μF/50V	CF93A1H104J
C451,452	253 1179 987	Ceramic cap. 470pF/50V	CK45B1H471K
C601,602	255 1265 936	Film cap. 0.01μF/50V	CQ93M1H103J(B)
C603	254 4250 945	Electrolytic 330μF/6.3V	CE04W0J331M
C604	254 4252 930	Electrolytic 100μF/10V	CE04W1A101M
C605	254 4252 901	Electrolytic 22μF/10V	CE04W1A220M
C606	255 1265 978	Film cap. 0.022μF/50V	CQ93M1H223J(B)
C701,702	254 4260 948	Electrolytic 1μF/50V	CE04W1H010M
C703,704	254 4261 921	Electrolytic 100μF/50V	CE04W1H101M

Ref. No.	Part No.	Part Name	Remarks
C705,706	254 6205 008	Electrolytic 10000μF/51V	CE68W==103MC(DL)
C707	256 1042 903	Metalized 0.1μF/250V	CF93A2E104K
C708	254 4263 916	Electrolytic 0.22μF/100V	CE04W2AR22M
OTHERS PARTS GROUP			**Q'ty**
	—	(P.W.board)	(1)
SW101	212 0336 005	Rotary switch	Rec out sel. 1
SW202	212 1161 004	1P push switch	Surce direct 1
RL101~106	214 0178 007	Relay(MR62-12USRY)	6
	204 8266 008	4P pin jack(S-GND)	for TAPE 2
	204 8278 009	6P pin jack(S-GND)	for INPUTS 1

1U-2939A μ-COM UNIT ASS'Y (PMA-725R)

Ref. No.	Part No.	Part Name	Remarks
SEMICONDUCTORS GROUP			
IC105	499 0150 008	IC SBX1610-52	Remote sensor
IC702	263 0793 002	IC NJM7806FA(S)	Regulator +6V
IC801	262 1579 303	IC HD404304A13P	μ-com
IC802	263 0476 002	IC LB1639	Motor driver
IC803	263 0535 008	IC M51954AL	Reset IC
IC901	263 0322 004	IC BA4558	
TR707	274 0168 006	Transistor 2SD2395(E/F)	
TR807	271 0192 905	Transistor 2SA933S(S)	
TR808,809	273 0303 910	Transistor 2SC1740S(S)	
TR810	269 0046 906	Transistor DTA114ES	Built in resistor
TR901~904	275 0038 045	Transistor 2SK369(BL)/(GR)-C	N type FET △VGS
D801~805	276 0616 907	Diode 1SS252	
D806	276 0553 905	Diode 1SR35-200A	
D807,808	276 0616 907	Diode 1SS252	
D901,902	276 0616 907	Diode 1SS252	
ZD704	276 0644 995	Zener diode MTZJ16A	16 V
LD801	393 9559 904	LED SLR-56DUTB7	Orange
LD802~807	393 9515 906	LED SLR-56VR70	Red
PH701	279 0034 041	Posistor PTH9M04BD222TS2F333	
RESISTORS GROUP			
⚠R832	241 2387 940	Carbon film 4.7ohm 1/4W	RD14B2E4R7JNBS
⚠R936,937	241 2377 905	Carbon film 68ohm 1/4W	RD14B2E680JNBS
CAPACITORS GROUP			
C709	254 4263 916	Electrolytic 0.22μF/100V	CE04W2AR22M
C711	253 1181 904	Ceramic cap. 0.01μF/50V	CK45F1H103Z
C712,713	254 4260 980	Electrolytic 10μF/50V	CE04W1H100M
C714,715	253 1181 904	Ceramic cap. 0.01μF/50V	CK45F1H103Z
C801	254 4213 937	Electrolytic 100μF/6.3V	CE04W0J101M(SRA)
C802	253 1181 917	Ceramic cap. 0.022μF/50V	CK45F1H223Z
C803	254 4213 937	Electrolytic 100μF/6.3V	CE04W0J101M(SRA)
C805	254 4213 937	Electrolytic 100μF/6.3V	CE04W0J101M(SRA)
C806	254 6190 906	Electrolytic 330μF/6.3V	CE04W0J331M(SRA)
C807	259 0007 003	Back up cap. 8200μF/5.5V	SB CAP==822=
C808	253 1181 917	Ceramic cap. 0.022μF/50V	CK45F1H223Z

Ref. No.	Part No.	Part Name	Remarks
C809	254 4196 973	Electrolytic 4.7μF/50V	CE04W1H4R7M(SRA)
C810	254 4196 944	Electrolytic 1μF/50V	CE04W1H010M(SRA)
C811	254 4196 928	Electrolytic 0.33μF/50V	CE04W1HR33M(SRA)
C812	256 1034 982	Metallized 0.12μF/50V	CF93A1H124J
C901	254 4260 948	Electrolytic 1μF/50V	CE04W1H010M
C902	253 1181 917	Ceramic cap. 0.022μF/50V	CK45F1H223Z
C905,906	253 1179 929	Ceramic cap. 150pF/50V	CK45B1H151K
C907,908	253 1179 961	Ceramic cap. 330pF/50V	CK45B1H331K
C909,910	253 1179 903	Ceramic cap. 100pF/50V	CK45B1H101K
C911,912	254 4260 948	Electrolytic 1μF/50V	CE04W1H010M
C913,914	255 1251 937	Film cap. 3300pF/50V	CQ92M1H332J(MRZ)
C915,916	254 4252 930	Electrolytic 100μF/10V	CE04W1A101M
C917,918	256 1034 953	Metallized 0.068μF/50V	CF93A1H683J
C919,920	254 4254 909	Electrolytic 10μF/16V	CE04W1C100M
C921,922	255 4223 959	Film cap. 0.018μF/50V	CQ92M1H183J(MRZ)
C923,924	255 1264 911	Film cap. 1200pF/50V	CQ93M1H122J(B)
C925,926	253 1179 961	Ceramic cap. 330pF/50V	CK45B1H331K
C935	254 4252 930	Electrolytic 100μF/10V	CE04W1A101M
C936,937	254 4256 936	Electrolytic 47μF/25V	CE04W1E470M
OTHERS PARTS GROUP			**Q'ty**
	—	(P.W.board)	(1)
L901,902	235 9003 002	Inductor (150μH)	FTZ choke coil 2
XL801	399 9018 003	Resonator	CST4.00 MGW 1
SW801~806	212 4789 001	Tact switch	6
SW901	212 1099 008	1P push swtch	MM/MC 1
	204 8413 000	2P pin jack(C-GND)	PHONO 1
	415 0309 013	P.V.C.tube L=10	for PH701 2

1U-2940 VOLUME UNIT ASS'Y
1U-2940A : Europe model
1U-2940B : U.K. model

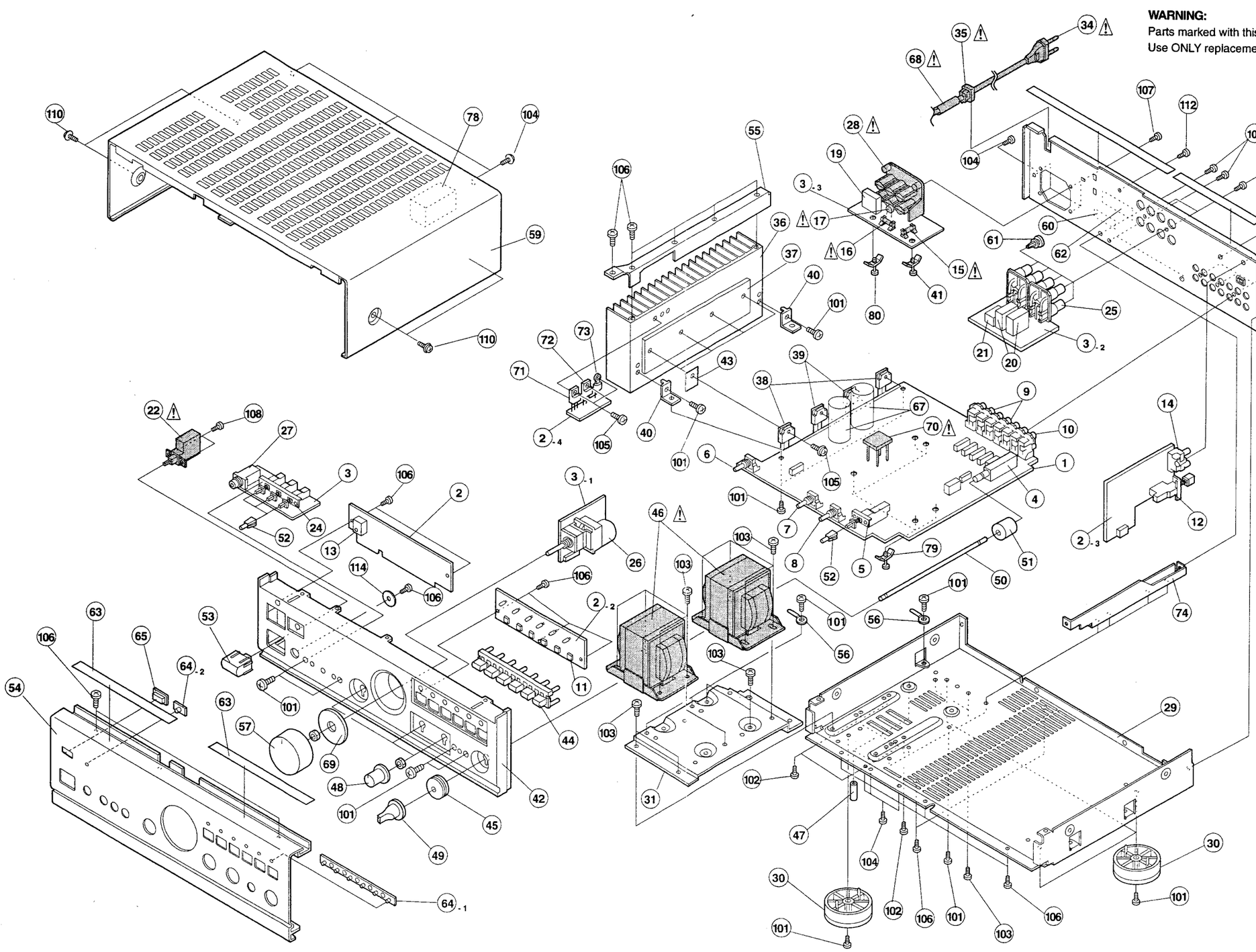
Ref. No.	Part No.	Part Name	Remarks
SEMICONDUCTORS GROUP			
TR617,618	273 0235 923	Transistor 2SC1841(E/F)	
D001	276 0616 907	Diode 1SS252	Europe model only
D441~444	276 0616 907	Diode 1SS252	
D610~612	276 0616 907	Diode 1SS252	
RESISTORS GROUP(Not included carbon film ±5%,1/4W)			
VR201	211 0869 003	Variable resistor 30kohm	Main volume
⚠R341,342	244 2043 982	Metal oxide 0.22ohm 1W	RS14B3AR22JNBS(S)
⚠R501,502	244 2043 937	Metal oxide 10ohm 1W	RS14B3A100JNBS(S)
⚠R505~508	244 2050 933	Metal oxide 180ohm 1W	RS14B3A181JNBS(S)
⚠R652	244 0157 003	Metal oxide 2.2kohm 3W	RS14B3F222JNB
⚠R653	244 2043 940	Metal oxide 2.2kohm 1W	RS14B3A222JNBS(S)
⚠R654	244 2052 915	Metal oxide 1.8kohm 1W	RS14B3A182JNBS(S)
⚠R655	244 2043 940	Metal oxide 2.2kohm 1W	RS14B3A222JNBS(S)
⚠R656	244 2052 915	Metal oxide 1.8kohm 1W	RS14B3A182JNBS(S)
⚠R660	244 0157 003	Metal oxide 2.2kohm 3W	RS14B3F222JNB
CAPACITORS GROUP			
⚠C002	253 6003 713	Ceramic cap. 4700pF/400V AC	CK45E2CAC472MC
C203,204	254 4254 909	Electrolytic 10μF/16V	CE04W1C100M
C205	255 1265 936	Film cap. 0.01μF/50V	CQ93M1H103J(B)
C501,502	256 1034 979	Metalized 0.1μF/50V	CF93A1H104J
OTHERS PARTS GROUP			**Q'ty**
	—	(P.W.board)	(1)
L301,302	235 0104 007	Inductor(1mH)	2
	202 0022 008	Fuse holder	Europe model 4
	202 0022 008	Fuse holder	U.K. model 2
⚠F001	206 1015 061	Fuse(2A)	1
⚠F002	206 1015 029	Fuse(1A T)	Europe model only 1
⚠	415 0299 000	Capacitor cover	for C002 1
⚠RL001	214 0142 004	Relay(TV-5)	Europe model only 1
RL601,602	214 0129 001	Relay(DH2TU)	for SP-A,E 2
RL603	214 0178 007	Relay(MR62-12USRY)	for Headphone 1
SW501	212 1162 003	3P push switch	for Speaker ON-OFF 1
	205 0484 001	8P speaker terminal	for Speaker 1
	204 8503 004	:Head phone jack	JA501 1
⚠	203 3950 002	3P AC outlet	AOL-1 Europe model only 1
⚠	205 0692 000	2P wrapping terminal	1

EXPLODED VIEW OF CHASSIS AND CABINET : PMA-925R

1 2 3 4 5 6 7 8

A B C D E

WARNING:
Parts marked with this symbol ⚠ ▒ have critical characteristics.
Use ONLY replacement parts recommended by the manufacturer.



PARTS LIST OFEXPLODED VIEW PMA-925R

Ref. No.	Part No.	Part Name	Remarks	Q'ty
◉ 1	1U- 2938 C	Main unit Ass'y		1s
◉ 2	1U- 2939 A	M-com unit Ass'y		1s
2-1	—	M-com unit		(1)
2-2	—	LED unit		(1)
2-3	—	Phono unit		(1)
2-4	—	Supply unit		(1)
◉ 3	1U- 2940 C	Volume unit Ass'y		1s
3-1	—	Volume unit		(1)
3-2	—	Speaker unit		(1)
3-3	—	AC outlet unit		(1)
3-4	—	Speaker sel.unit		(1)
4	212 0336 005	Rotary switch	SW101 Rec out sel.	1
5	212 1161 004	1P push switch	SW202 S.Direct	1
6	211 0798 103	Variable resistor 100kohm	VR202 Balance	1
7	211 0834 009	Variable resistor 30kohm	VR204 Bass	1
8	211 0834 012	Variable resistor 10kohm	VR203 Treble	1
9	204 8266 008	4P pin jack(S-GND)	for TAPE	2
10	204 8278 009	6P pin jack(S-GND)	for INPUTS	1
11	212 4789 001	Tact switch	SW801–806	6
12	212 1099 008	1P push switch	SW901 MM/MC	1
13	499 0150 008	Remote sensor SBX1610-52	IC105	1
14	204 8413 000	2P pin jack(C-GND)	for PHONO	1
⚠ 15	206 1015 032	Fuse (2.5A)	F001	1
⚠ 16	206 1015 029	Fuse (1A T)	F002	1
⚠ 17	415 0299 000	Capacitor cover	for C002	1
18	—	—		
⚠ 19	214 0142 004	Relay(TV-5)	RL001	1
20	214 0129 001	Relay(DH2TU)	RL601,602	2
21	214 0178 007	Relay(MR62-12USRY)	RL101–106,603	7
⚠ 22	212 1030 009	Powre switch(TV-5)	SW001	1
23	—	—		
24	212 1162 003	3P push switch	SW501 Speaker ON-OFF	1
25	205 0484 001	8P speaker terminal	for speaker	1
26	211 0869 003	Variable resistor 30kohm	VR201 Main volume	1
27	204 8503 004	:Head phone jack	JA501	1
⚠ 28	203 3950 002	3P AC outlet	AOL-1	1
◉ 29	411 1267 712	*Main chassis		1
30	104 0282 007	:*Foot Ass'y		4
◉ 31	441 1786 016	Trans bracket		1
◉ 32	105 1203 004	Rear panel		1
33	205 0071 016	Terminal Ass'y		1
⚠ 34	206 2063 009	AC cord with plug		1
⚠ 35	445 0056 008	Cord bush		1
◉ 36	417 0503 132	Power radiator		1
37	417 0507 015	:*CU plate		1
38	273 0389 002	Transistor 2SC3855(O/P/Y)(Z)	TR319,320	2
39	271 0240 006	Transistor 2SA1491(O/P/Y)(Z)	TR321,322	2
◉ 40	412 4000 005	:*P.W.B.bracket (A)		2
41	449 0138 009	:Card spacer (L=12)		1
◉ 42	146 1637 008	Inner panel	Black model	1
◉ 42	146 1637 011	Inner panel	Gold model	1
43	—	Mica sheet		4
44	113 1739 003	:*Functin button	Black model	1
44	113 1739 016	:*Functin button	Gold model	1
45	—	—		
⚠ 46	233 6207 009	Power transformer		2

Ref. No.	Part No.	Part Name	Remarks	Q'ty
47	462 0094 007	Screw tube		2
48	112 0646 000	:*Knob(S)	Black model	3
48	112 0646 013	:*Knob(S)	Gold model	3
49	112 0641 102	:*Fuji knob	Black model	1
49	112 0641 115	:*Fuji knob	Gold model	1
50	112 0784 001	Volume knob joint		1
51	112 0785 000	Volume knob joint (B)		1
52	113 1745 107	:*Push button(Round)	Black model	4
52	113 1745 110	:*Push button(Round)	Gold model	4
53	113 1738 101	:*Power button	Black model	1
53	113 1738 114	:*Power button	Gold model	1
◉ 54	144 2509 207	Front panel	Black model	1
54	144 2509 210	Front panel	Gold model	1
◉ 55	412 4136 005	Radiator bracket		1
56	445 0048 003	Cord holder L=76		3
57	112 0789 006	Volume knob Ass'y	Black model	1
57	112 0789 019	Volume knob Ass'y	Gold model	1
★ 58	445 8004 007	Wire clamper		18
◉ 59	102 0521 128	::Top cover	Black model	1
59	102 0521 131	::Top cover	Gold model	1
60	513 2444 005	Label (China)	Puton rear panel	1
61	477 0096 007	Push rivet		8
62	513 2433 003	Serial No. sheet		1
63	122 0219 007	Sheet	F/Panel,R/Panel	4
64	143 0945 006	:*Lens		1
64-1	—	:*Lens		(1)
64-2	—	:*Lens		(1)
65	143 9181 007	:*Remocon window		1
★ 66	254 4252 082	Electrolytic cap. 2200μF/10V	C309,310	2
67	254 6206 007	Electrolytic cap. 12000μF/63V	C705,706	2
⚠ 68	415 0305 017	P.V.C. tube	for AC cord	1
◉ 69	412 4135 006	Volume plate	Black model	1
412 4135 019	Volume plate	Gold model	1
⚠ 70	276 0424 005	Diode 4D4B42	D-702 Bridge	1
71	272 0129 007	Transistor 2SB1566(E/F)	TR702	1
72	263 0793 002	IC NJM7806FA(S)	IC702 Regulator +6V	1
73	279 0034 041	PTH94M04BD222TS2F333	PH701	1
◉ 74	412 4156 001	Trans frame		1
75	—	—		
76	—	—		
77	146 1651 000	Side spacer		2
78	461 0940 006	:Rubber form		1
79	449 0138 025	Card spacer (L=31)		5
80	449 0138 012	Card spacer (L=25)		1
81	—	—		

PACKING & ACCESSORIES

Ref. No.	Part No.	Part Name	Remarks	Q'ty
SCREWS & WASHERS				
101	473 7002 018	Screw 3x8	CBTS(S)-Z	17
102	473 7004 016	Screw 4x6	CBTS(S)-Z	8
103	473 7004 029	Screw 4x10	CBTS(S)-Z	14
104	473 7015 018	Screw 3x8	CBTS(S)-B	11
105	473 8007 009	Cup screw 3x12		7
106	473 7508 017	Screw 3x10	CBTS(P)-B	18
107	477 0064 107	Fixing screw 3x10		10
108	473 7508 004	Screw 3x6	CBTS(P)-B	2
109	473 7500 044	Screw 3x8	CBTS(P)-B	2
110	477 0263 005	3P swelling screw	Black model	4
110	477 0263 018	3P swelling screw	Gold model	4
111	—	—		
112	473 7002 034	Screw 3x6	CBTS(S)-B	1
113	477 0018 001	Washer	P-87	1
114	475 1175 002	:Washer		1
115				

Ref. No.	Part No.	Part Name	Remarks	Q'ty
151	GEN 3580	Envelope Sub. Ass'y		1s
◉ 151-1	505 8006 019	Envelope		(1)
◉ 151-2	511 2899 007	Operating instructions		(1)
151-3	399 0277 004	Remoto control unit	RC-176	(1)
151-4	—	Batteries	R6P/AA/SUM-3	(2)
151-5	515 0671 326	DENON service network		(1)
152	505 8092 010	Laminate envelope		1
◉ 153	503 1222 001	Cushion		2
◉ 154	502 0892 002	:Support pad		2
◉ 155	502 1227 006	:Sub cushion		1
◉ 156	501 1927 009	Carton case		1
◉ 157	513 2446 003	China label(E)		1
◉ 158	513 2447 002	China label(F)		1
◉ 159	513 9111 001	Color label (Gold)	Gold model only	2

NOTE FOR PARTS LIST

- Part indicated with the mark " ◉ " are not always in stock and possibly to take a long period of time for supplying, or in some case supplying of part may be refused.
- When ordering of part, clearly indicate "1" and "I" (i) to avoid mis-supplying.
- Ordering part without stating its part number can not be supplied.
- Part indicated with the mark "★" is not illustrated in the exploded view.

WARNING:

Parts marked with this symbol ⚠ ▒▒ have critical characteristics.
Use ONLY replacement parts recommended by the manufacturer.

EXPLODED VIEW OF CHASSIS AND CABINET : PMA-725R

WARNING:
Parts marked with this symbol ⚠ ▒▒ have critical characteristics.
Use ONLY replacement parts recommended by the manufacturer.

PARTS LIST OF EXPLODED VIEW PMA-725R

Ref. No.	Part No.	Part Name	Remarks	Q'ty
◉ 1	1U- 2938 A	Main unit Ass'y	Europe model	1s
◉ 1	1U- 2938 B	Main unit Ass'y	U.K. model	1s
◉ 2	1U- 2939 A	M-com unit Ass'y		1s
2-1	—	M-com unit		(1)
2-2	—	LED unit		(1)
2-3	—	Phono unit		(1)
2-4	—	Supply unit		(1)
◉ 3	1U- 2940 A	Volume unit Ass'y	Europe model	1s
◉ 3	1U- 2940 B	Volume unit Ass'y	U.K. model	1s
3-1	—	Volume unit		(1)
3-2	—	Speaker unit		(1)
3-3	—	AC outlet unit	Europe model only	(1)
3-4	—	Speaker sel.unit		(1)
3-5	—	Power switch unit	U.K. model only	(1)
3-6	—	AC unit	U.K. model only	(1)
4	212 0336 005	Rotary switch	SW101 Rec out sel.	1
5	212 1161 004	1P push switch	SW202 S.Direct	1
6	211 0798 103	Variable resistor 100kohm	VR202 Balance	1
7	211 0834 009	Variable resistor 30kohm	VR204 Bass	1
8	211 0834 012	Variable resistor 10kohm	VR203 Treble	1
9	204 8266 008	4P pin jack(S-GND)	for TAPE	2
10	204 8278 009	6P pin jack(S-GND)	for INPUTS	1
11	212 4789 001	Tact switch	SW801~806	6
12	212 1099 008	1P push switch	SW901 MM/MC	1
13	499 0150 008	Remote sensor SBX1610-52	IC105	1
14	204 8413 000	2P pin jack(C-GND)	for PHONO	1
⚠ 15	206 1015 061	Fuse (2 A)	F001	1
⚠ 16	206 1015 029	Fuse (1A T)	F002	1
			Europe model only	
⚠ 17	415 0299 000	Capacitor cover	for C002	1
18	—	—		
⚠ 19	214 0142 004	Relay(TV-5)	RL001	1
			Europe model only	
20	214 0129 001	Relay(DH2TU)	RL601,602	2
21	214 0178 007	Relay(MR62-12USRY)	RL101~106,603	7
⚠ 22	212 1030 009	Powre switch(TV-5)	SW001	1
23	—	—		
24	212 1162 003	3P push switch	SW501 Speaker	1
			ON-OFF	
25	205 0484 001	8P speaker terminal	for speaker	1
26	211 0869 003	Variable resistor 30kohm	VR201 Main volume	1
27	204 8503 004	:Head phone jack	JA501	1
⚠ 28	203 3950 002	3P AC outlet	ACL-1	1
			Europe model only	
◉ 29	411 1267 712	*Main chassis		1
30	104 0282 007	:*Foot Ass'y		4
◉ 31	441 1786 003	Trans bracket		1
◉ 32	105 1198 009	Rear panel	Europe model	1
◉ 32	105 1198 012	Rear panel	U.K. model	1
33	205 0071 016	Terminal Ass'y		1
⚠ 34	206 2063 009	AC cord with plug	Europe model	1
⚠ 34	206 2131 009	AC cord with plug	U.K. model	1
⚠ 35	445 0056 008	Cord bush		1
◉ 36	417 0503 129	Power radiator		1
37	—	—		
38	274 0173 004	Transistor 2SD2390(O/P/Y)	TR319,320	2
39	272 0137 002	Transistor 2SB1560(O/P/Y)	TR321,322	2

Ref. No.	Part No.	Part Name	Remarks	Q'ty
◉ 40	412 4000 005	:*P.W.B.bracket (A)		2
◉ 41	—	—		
◉ 42	146 1632 003	Inner panel	Black model	1
◉ 42	146 1632 016	Inner panel	Gold model	1
43	—	Mica sheet		4
44	113 1739 003	:*Functin button	Black model	1
44	113 1739 016	:*Functin button	Gold model	1
45	124 0032 057	Felt sheet		1
⚠ 46	233 6203 003	Power transformer		2
47	462 0094 007	Screw tube		2
48	112 0646 000	:*Knob(S)	Black model	3
48	112 0646 013	:*Knob(S)	Gold model	3
49	112 0641 102	:*Fuji knob	Black model	1
49	112 0641 115	:*Fuji knob	Gold model	1
50	112 0784 001	Volume knob joint		1
51	112 0785 000	Volume knob joint (B)		1
52	113 1745 107	:*Push button(Round)	Black model	4
52	113 1745 110	:*Push button(Round)	Gold model	4
53	113 1738 101	:*Power button	Black model	1
53	113 1738 114	:*Power button	Gold model	1
◉ 54	144 2507 306	Front panel	Black model	1
54	144 2507 319	Front panel	Gold model	1
◉ 55	412 4128 000	Radiator bracket		1
56	445 0048 003	Cord holder L=76		3
57	112 0744 009	Volume knob Ass'y	Black model	1
57	112 0744 012	Volume knob Ass'y	Gold model	1
★ 58	445 8004 007	Wire clamper		18
◉ 59	102 0543 119	::Top cover	Black model	1
59	102 0543 122	::Top cover	Gold model	1
60	513 2444 005	Label (China)	Puton rear panel	1
61	477 0096 007	Push rivet		8
62	513 2433 003	Serial No. sheet		1
63	122 0219 007	Sheet	F/Panel,R/Panel	4
64	143 0945 006	:*Lens		1
64-1	—	:*Lens		(1)
64-2	—	:*Lens		(1)
65	143 9181 007	:*Remocon window		1
★ 66	254 4252 082	Electrolytic cap. 2200μF/10V	C309,310	2
67	254 6205 008	Electrolytic cap. 10000μF/51V	C705,706	2
⚠ 68	415 0305 017	P.V.C. tube	for AC cord	1
◉ 69	412 4135 006	Volume plate	Black model	1
	412 4135 019	Volume plate	Gold model	1
⚠ 70	276 0338 007	Diode S4VB20F	D702 Bridge	1
71	272 0129 007	Transistor 2SB1566 (E/F)	TR702	1
72	263 0793 002	IC NJM7806FA (S)	IC702 Regulator+6V	1
73	279 0034 041	PTH9M04BD222TS2F333	PH701	1
74	—	—		
75	412 4159 008	:Support bracket		1
76	461 0942 004	Spacer (T=1)		2
77	146 1648 000	Side spacer		2
78	461 0941 005	:Rubber form		1
79	449 0138 012	:Card spacer (L=25)		5
80	449 0138 012	:Card spacer (L=25)		1
81	449 0138 012	:Card spacer (L=25)		1
82	449 0138 025	Card spacer (L=31)		1
★ 83	513 2001 008	Insulate mark sheet	U.K. model only	1
⚠ 84	202 0013 101	Fuse holder	U.K. model only	1

Ref. No.	Part No.	Part Name	Remarks	Q'ty
85	415 0785 006	Insulating plate	U.K. model only	1
86	513 1390 008	Fuse label	U.K. model only	1
⚠ 87	203 0150 009	Wire connector	U.K. model only	2
88	415 0360 052	P.V.C. Tubing (19)	U.K. model onoy	1
SCREWS & WASHERS				
101	473 7002 018	Screw 3x8	CBTS(S)-Z	15
102	473 7004 016	Screw 4x6	CBTS(S)-Z	8
103	473 7004 029	Screw 4x10	CBTS(S)-Z	14
104	473 7015 018	Screw 3x8	CBTS(S)-B	10
105	473 8007 009	Cup screw 3x12		7
106	473 7508 017	Screw 3x10	CBTS(P)-B	18
107	477 0064 107	Fixing screw 3x10	Europe model	10
107	477 0064 107	Fixing screw 3x10	U.K. model	6
108	473 7508 004	Screw 3x6	CBTS(P)-B	2
109	—	—		
110	477 0263 005	3P swelling screw	Black model	4
110	477 0263 018	3P swelling screw	Gold model	4
111	—	—		
112	473 7002 034	Screw 3x6	CBTS(S)-B	1
113	477 0018 001	Washer	P-87	1
114	475 1175 002	:Washer		1
115	471 3304 031	Screw 3x8	CBS U.K. model only	1
116	475 6006 008	Nut M3	U.K. model only	1

PACKING & ACCESSORIES

Ref. No.	Part No.	Part Name	Remarks	Q'ty
151	GEN 3580	Envelope Sub. Ass'y		1s
◉ 151-1	505 8006 019	Envelope		(1)
◉ 151-2	511 2899 007	Operating instructions		(1)
151-3	399 0277 004	Remoto control unit	RC-176	(1)
151-4	—	Batteries	R6P/AA/SUM-3	(2)
151-5	515 0671 326	DENON service network		(1)
152	505 8092 010	Laminate envelope		1
◉ 153	503 1218 002	Cushion		2
◉ 154	502 0893 001	:L supporter		2
◉ 155	502 0894 000	:Pad (T=10)		1
◉ 156	501 1922 004	Carton case		1
◉ 157	513 2446 003	China label(E)		1
◉ 158	513 2447 002	China label(F)		1
◉ 159	513 9111 001	Color label (Gold)	Gold model only	2
◉ 160	504 0176 009	AC protect sheet	U.K. model only	1
◉ 161	503 1228 008	Support pad	U.K. model only	1

NOTE FOR PARTS LIST

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- Part indicated with the mark "★" is not illustrated in the exploded view.

WARNING:

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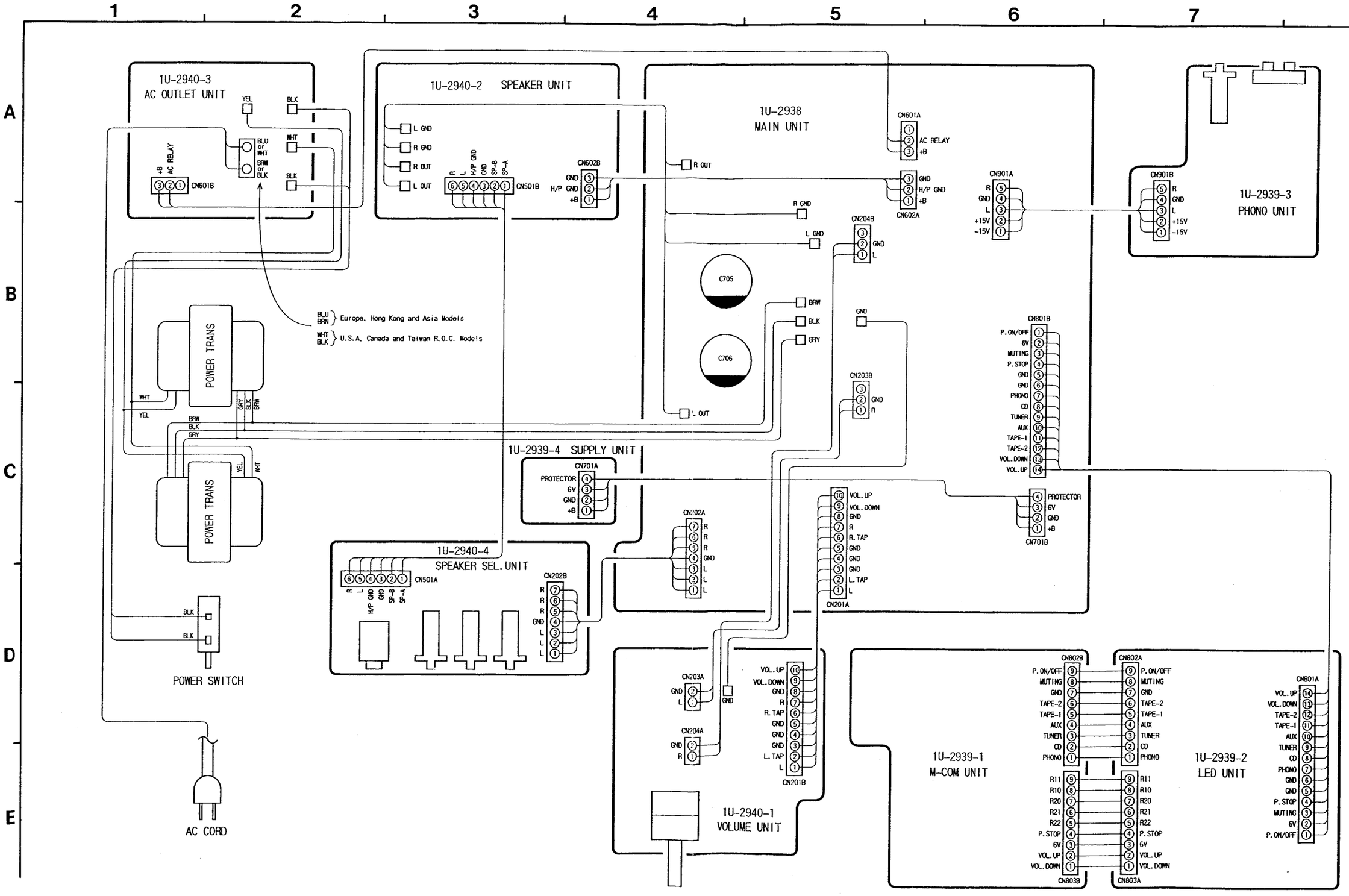
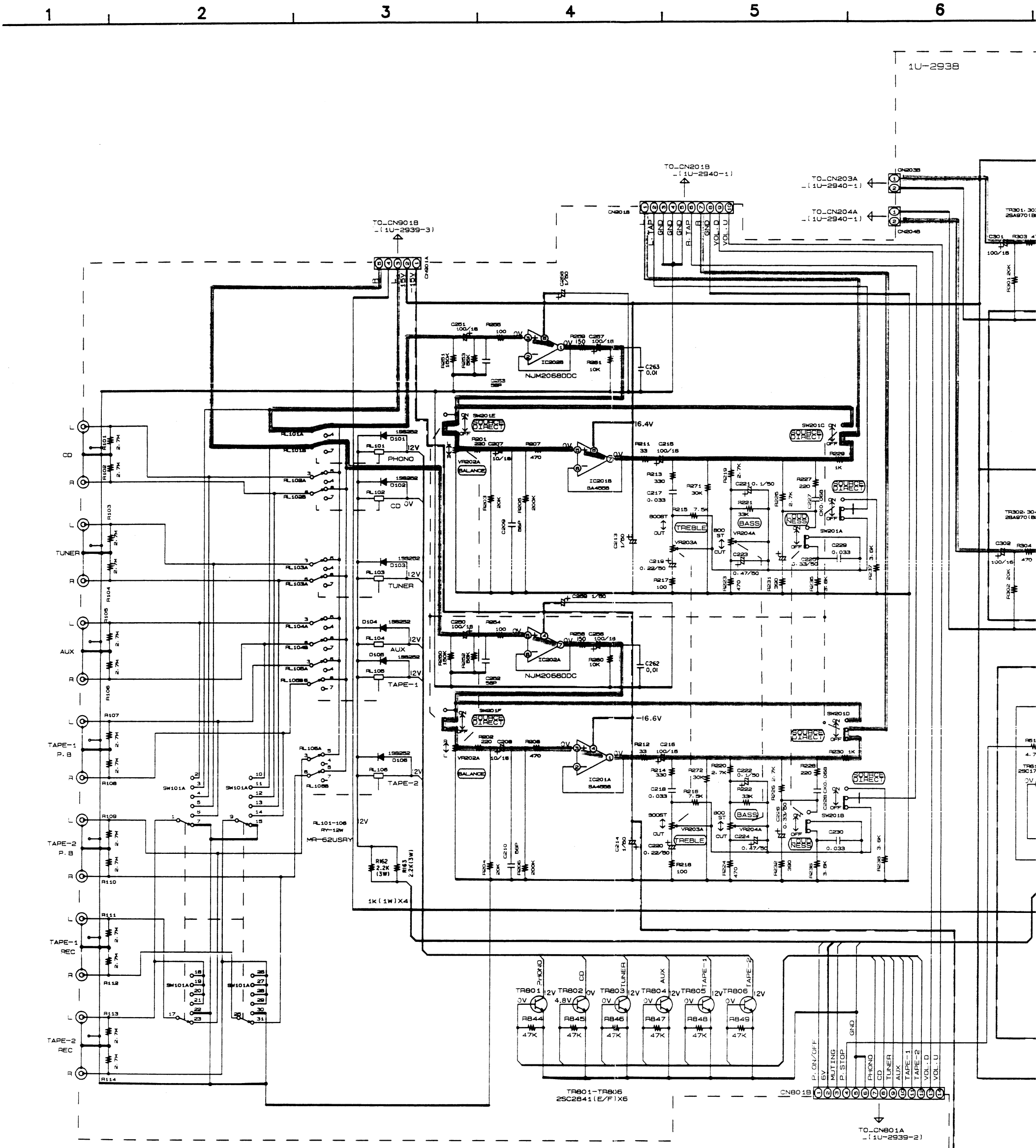
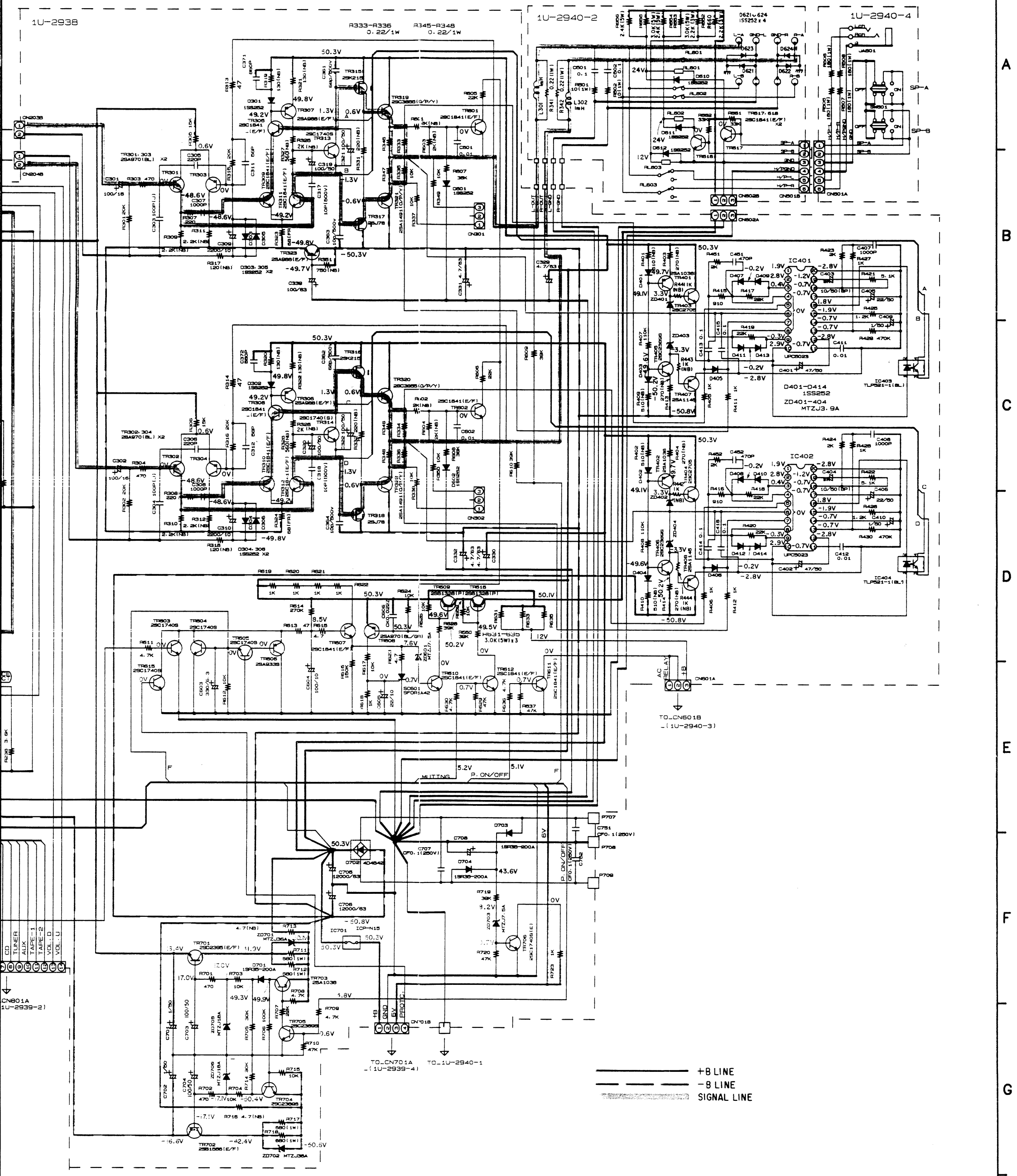
WIRING DIAGRAM



SCHEMATIC DIAGRAM (1/4) : PMA-925R





NOTES

ALL RESISTANCE VALUES IN OHM. k=1,000 OHM. M=1,000,000 OHM

ALL CAPACITANCE VALUES IN MICRO FARAD. P=MICRO-MICRO FARAD

EACH VOLTAGE AND CURRENT ARE MEASURED AT NO SIGNAL INPUT CONDITION.

CIRCUIT AND PARTS ARE SUBJECT TO CHANGE WITHOUT PRIOR NOTICE.

WARNING:

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Use ONLY replacement parts recommended by the manufacturer.

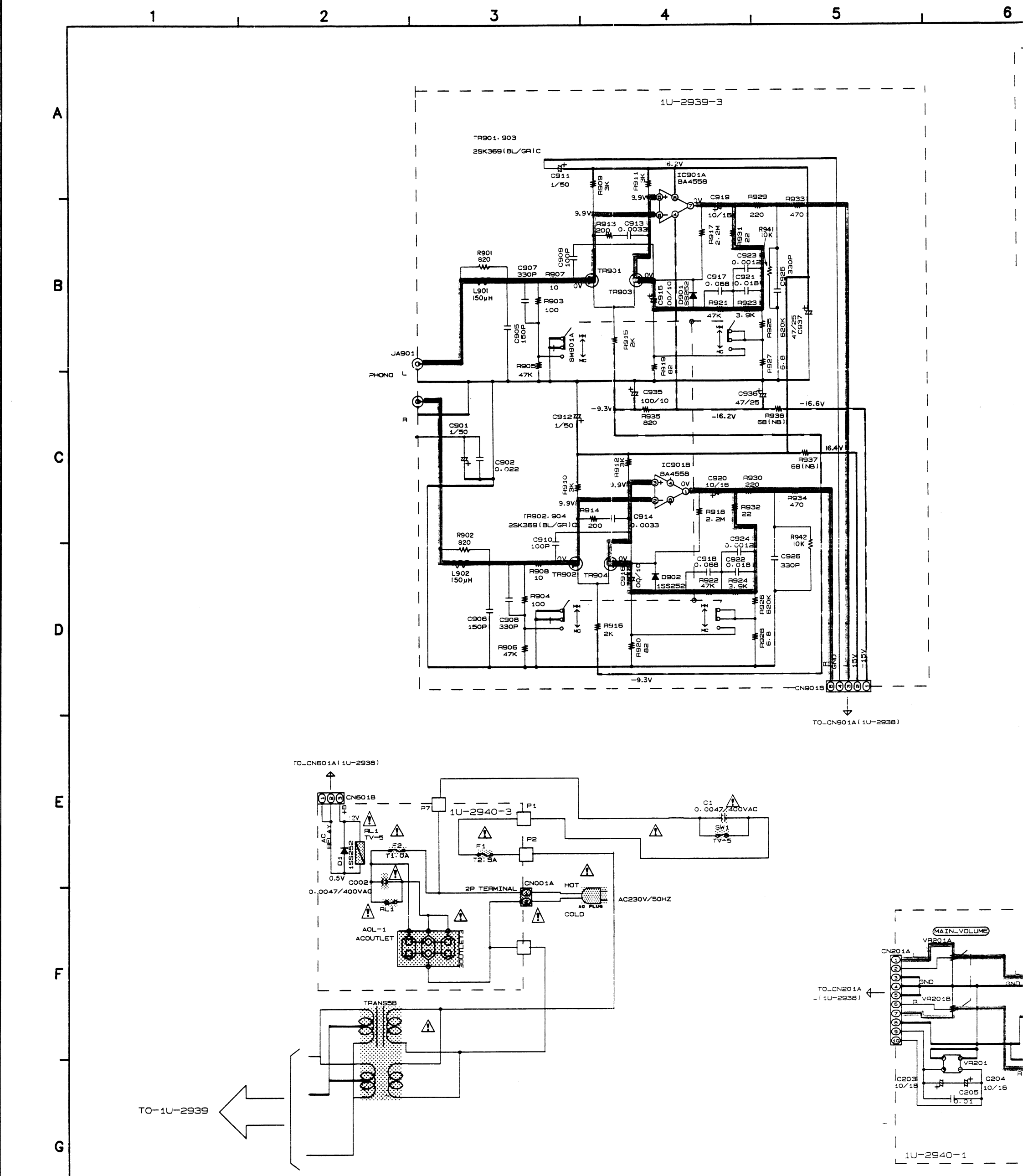
CAUTION:

Before returning the unit to the customer, make sure you make either (1) a leakage current check or (2) a line to chassis resistance check. If the leakage current exceeds 0.5 milliamps, or if the resistance from chassis to either side of the power cord is less than 240 kohms, the unit is defective.

WARNING:

DO NOT return the unit to the customer until the problem is located and corrected.

SCHEMATIC DIAGRAM (2/4) : PMA-925R



NOTES
ALL RESISTANCE VALUES IN OHM. k=1,000 OHM, M=1,000,000 OHM

ALL CAPACITANCE VALUES IN MICRO FARAD. P=MICRO-MICRO FARAD

EACH VOLTAGE AND CURRENT ARE MEASURED AT NO SIGNAL INPUT CONDITION.

CIRCUIT AND PARTS ARE SUBJECT TO CHANGE WITHOUT PRIOR NOTICE.

WARNING:
Parts marked with this symbol ⚠ ▒▒ have critical characteristics.
Use ONLY replacement parts recommended by the manufacturer.

CAUTION:
Before returning the unit to the customer, make sure you make either (1) a leakage current check or (2) a line to chassis resistance check. If the leakage current exceeds 0.5 milliamps, or if the resistance from chassis to either side of the power cord is less than 240 kohms, the unit is defective.

WARNING:
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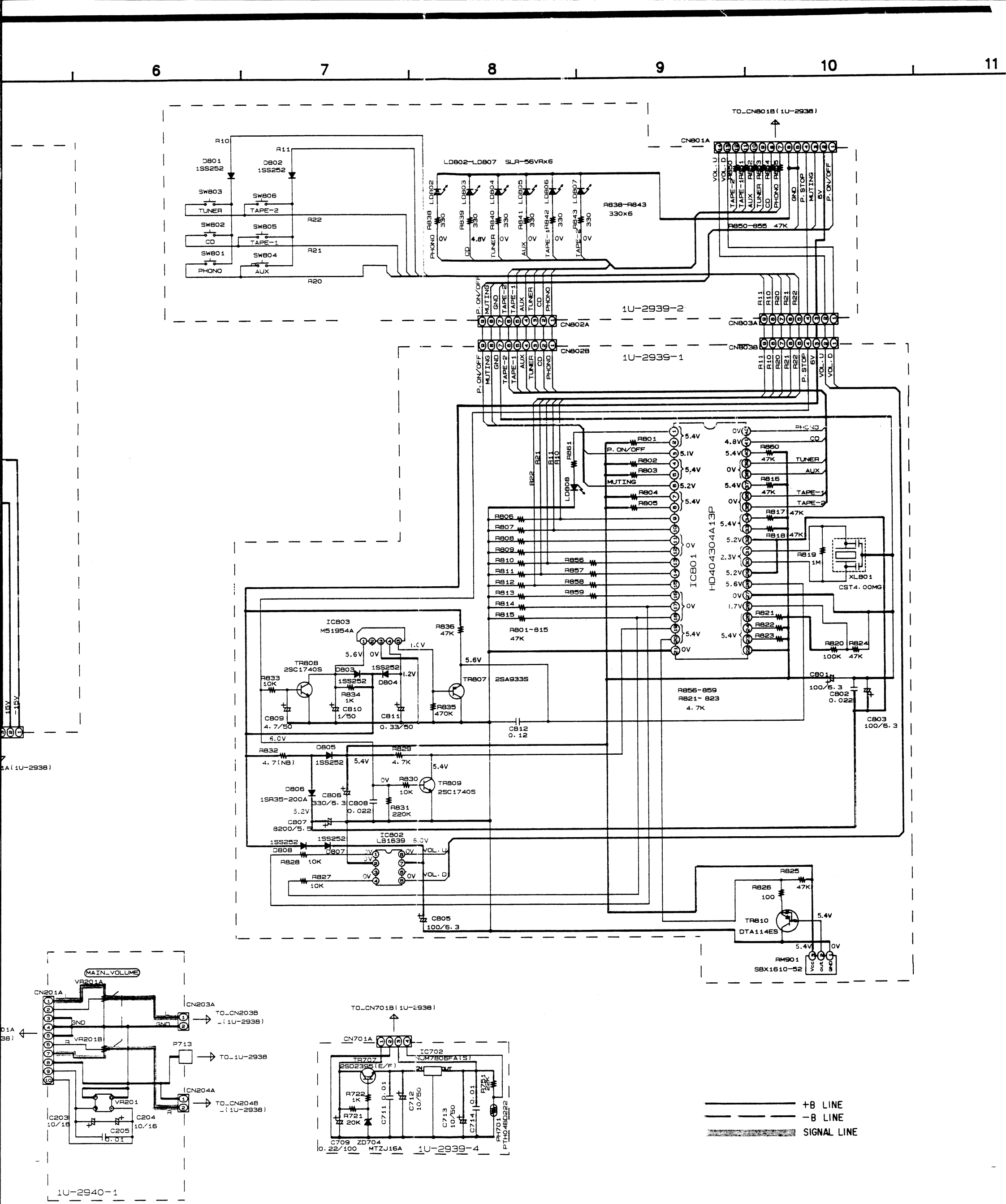
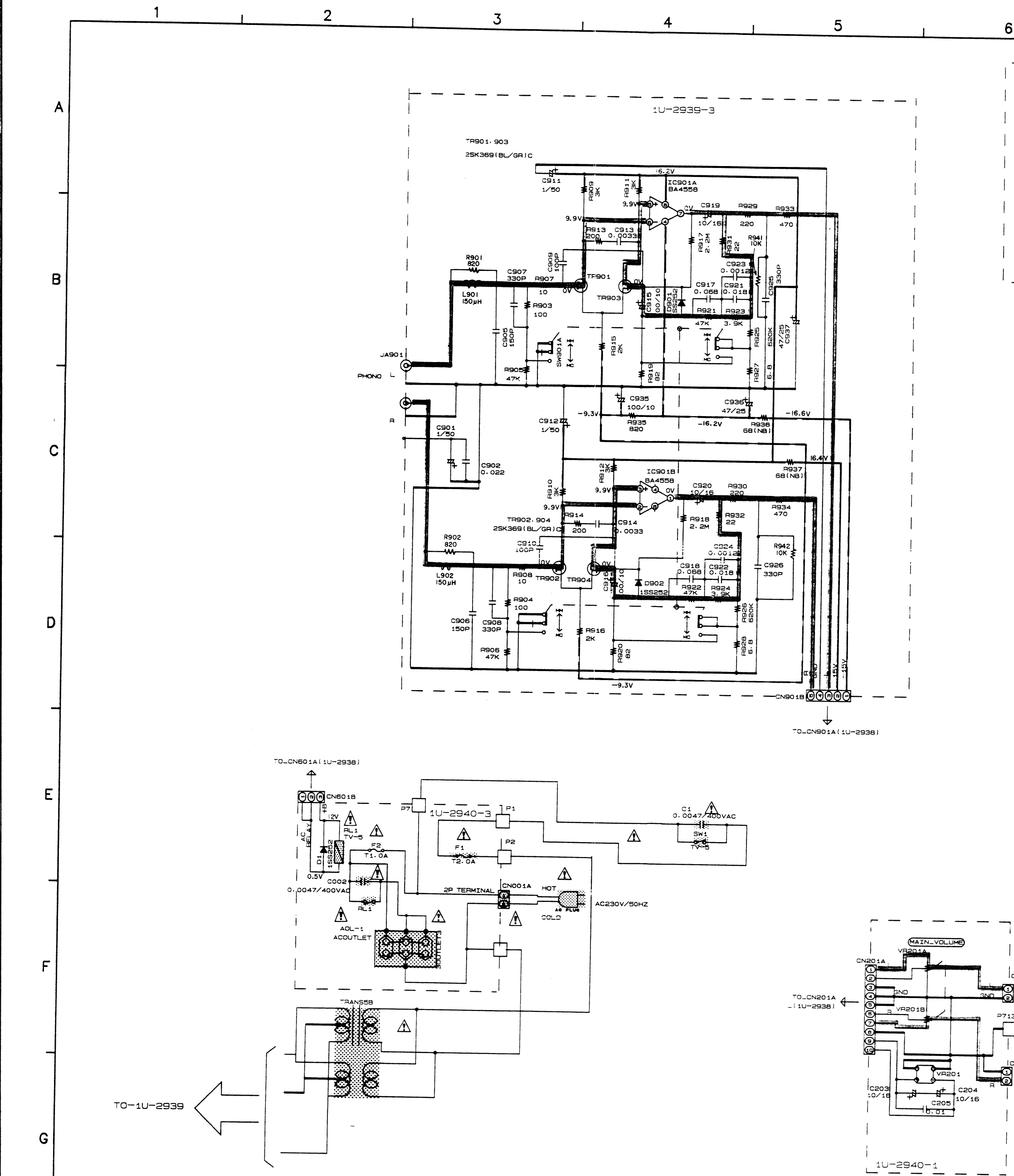


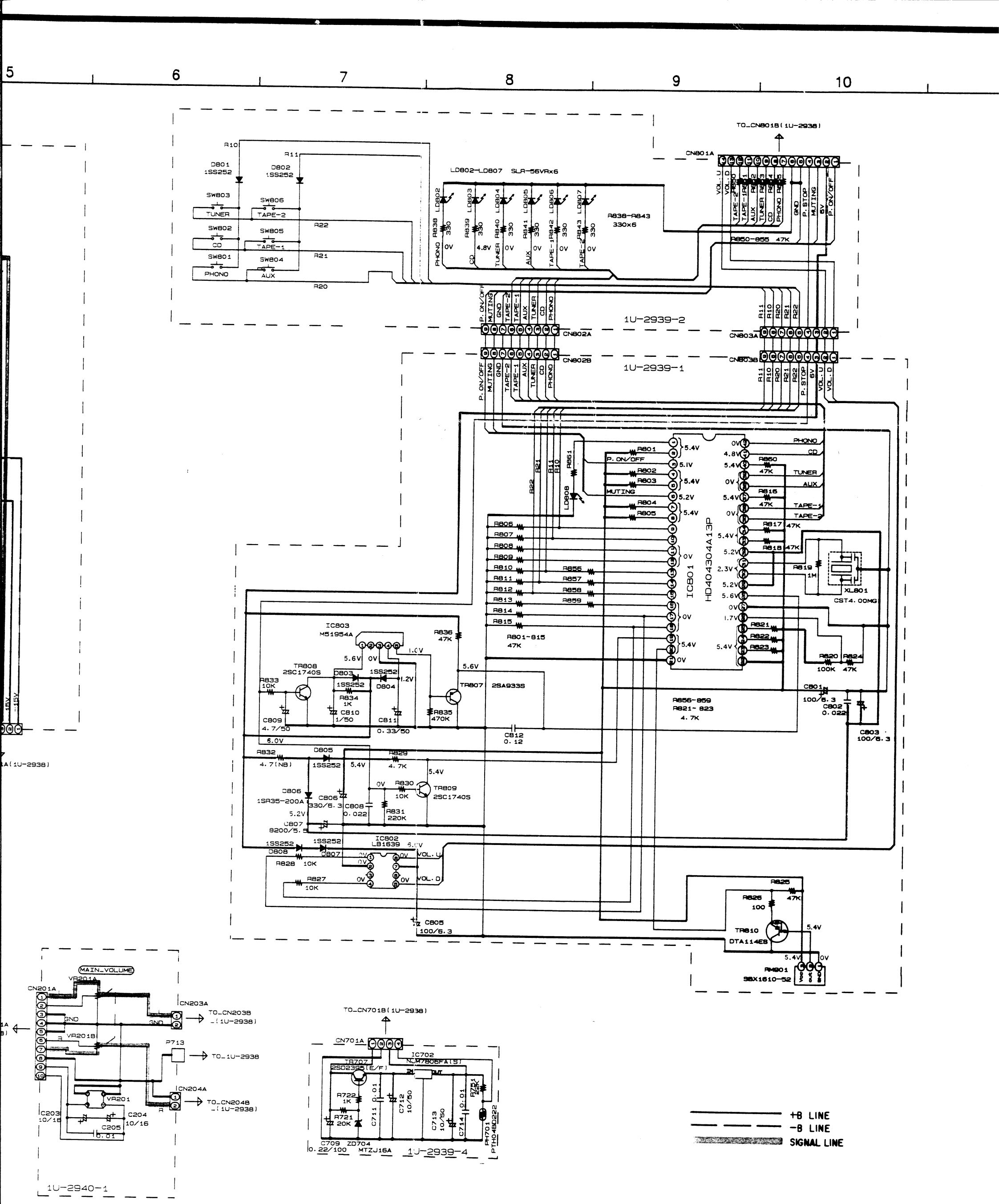
+B LINE
−B LINE
SIGNAL LINE

SCHEMATIC DIAGRAM (4/4) : PMA-725R

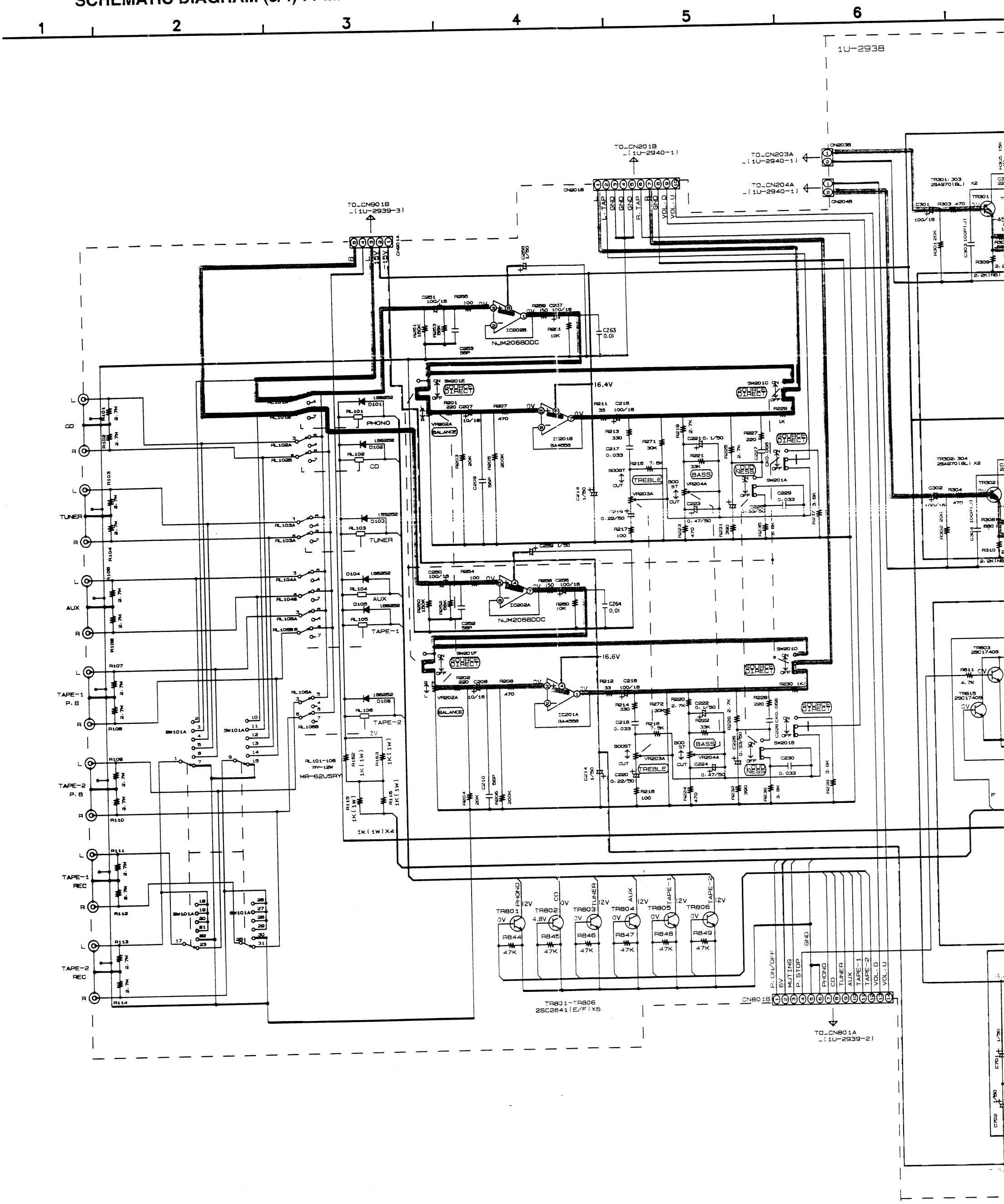


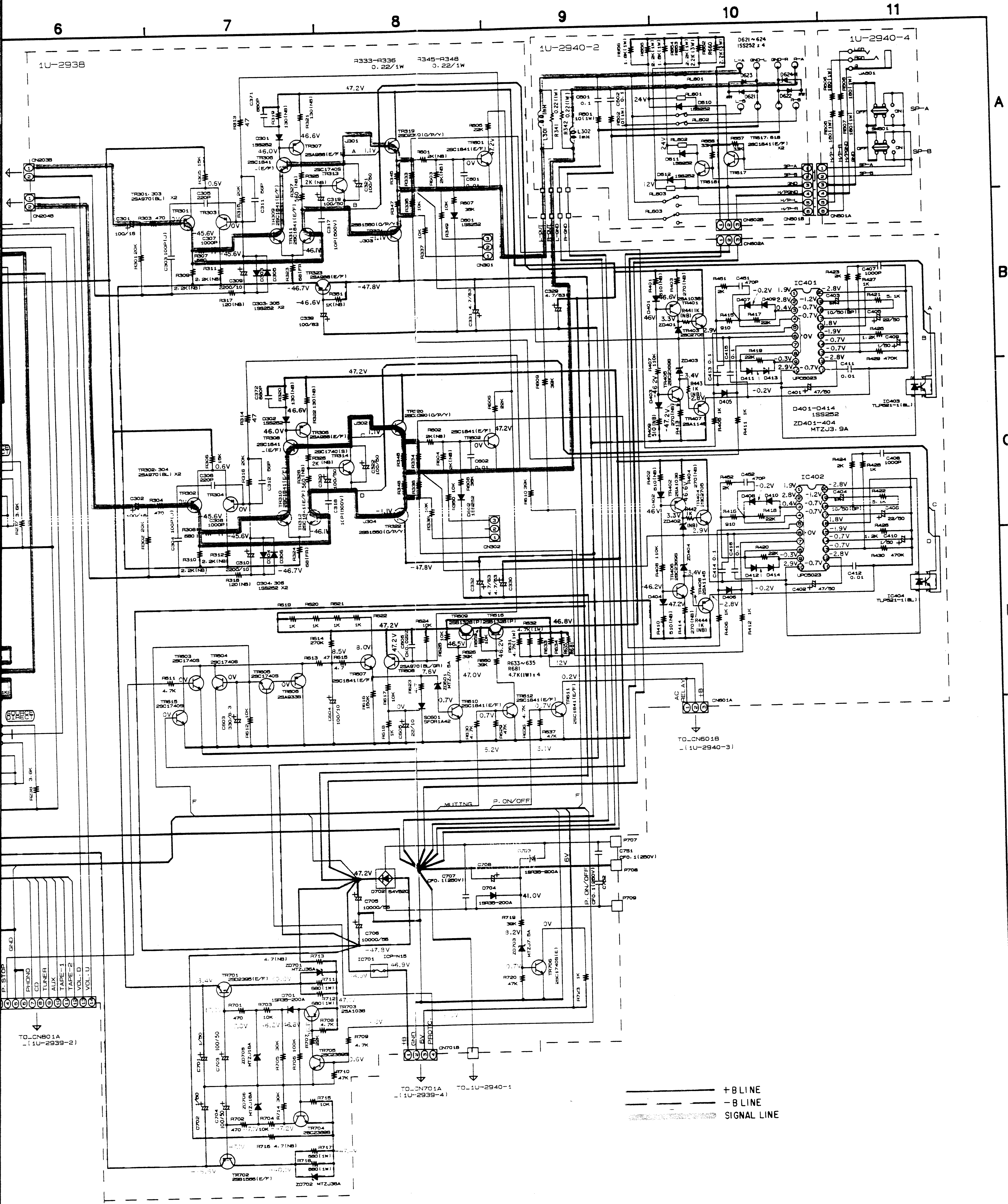
NOTES

ALL RESISTANCE VALUES IN OHM. k=1,000 OHM, M=1,000,000 OHM
ALL CAPACITANCE VALUES IN MICRO FARAD. P=MICRO-MICRO FARAD
EACH VOLTAGE AND CURRENT ARE MEASURED AT NO SIGNAL INPUT CONDITION.
CIRCUIT AND PARTS ARE SUBJECT TO CHANGE WITHOUT PRIOR NOTICE.


5
6
7
8
9
10
TO_CN801B(1U-2938)
CN801A
LD802-LD807 SLR-56VRx6
R838-R843 330x6
R850-855 47K
R10
R11
D801 1SS252
D802 1SS252
SW803 TUNER
SW806 TAPE-2
SW802 CD
SW805 TAPE-1
SW801 PHONO
SW804 AUX
R22
R21
R20
1U-2939-2
CN802A
CN803A
1U-2939-1
CN802B
CN803B
IC801 HD404304A13P
R801-815 47K
R856-859 R821-823 4.7K
IC803 M51954A
TR808 2SC1740S
TR807 2SA933S
TR809 2SC1740S
IC802 LB1639
D808 1SS252
D807 1SS252
D805 1SS252
D806 1SR35-200A
R828 10K
R827 10K
R832 4.7(NB)
R829 4.7K
R830 10K
R831 220K
R833 10K
R834 1K
R835 470K
R836 47K
R860 47K
R815 47K
R817 47K
R818 47K
R819 1M
R820 100K
R824 47K
XL801 CST4.00MG
C801 100/6.3
C802 0.022
C803 100/6.3
C805 100/6.3
C806 330/6.3
C807 8200/5.5
C808 0.022
C809 4.7/50
C810 1/50
C811 0.33/50
C812 0.12
TR810 DTA114ES
RM901 9BX1610-52
PHONO
CD
TUNER
AUX
TAPE-1
TAPE-2
P. ON/OFF
MUTING
VOL. U
VOL. D
P. STOP
6V
GND
+15V
-15V
1A(1U-2938)
MAIN_VOLUME
VR201A
VR201B
VR201
CN201A
CN203A
CN204A
TO_CN203B (1U-2938)
TO_CN204B (1U-2938)
P713
TO_1U-2938
1U-2940-1
TO_CN701B(1U-2938)
CN701A
IC702 NJM7805FA(S)
TR707 2SD2395(E/F)
R722 1K
R721 20K
C709 0.22/100
ZD704 MTZJ16A
C711 0.01
C712 10/50
C713 10/50
C714 0.01
R751 22K
PH701 PTH04B0222
1U-2939-4
+B LINE
-B LINE
SIGNAL LINE

SCHEMATIC DIAGRAM (3/4) : PMA-725R





NOTES

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